

# AMERICAN RAILROAD JOURNAL.

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## American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & Co., 136 NASSAU ST.

Saturday, August 16, 1851.

### Great Railroad Ovation.

The "City of Notions" has just had a new idea creep into her head. For years past she has been busy upon her railroad projects, which when completed, were to make her the commercial centre of the United States, and "the rest of mankind." These roads are now all finished to her mind, but still the centre of gravity of the universe is unchanged. The Green Mountains yet elevate their obdurate heads, and demand a heavy tribute from all who insist upon climbing over their shoulders. To avoid this imposition, people, in spite of all solicitation, still keep up their old habits of bringing their bread and cheese, and other fixings, to New York, which, to a traveller from the north and west, is all the way down hill. This contumacious behaviour, has sorely grieved our Boston friends, and they are determined to submit no longer. Something must be done, and something is going to be done. "A GRAND OVATION," says the Bos-

ton Courier, is to happen, to which are to be invited, to use the language of our cotemporary, "the President of the United States, the Governor General of Canada, the Governors of the several States of New England, the Presidents of the railroads, and the distinguished merchants and citizens of the principal places along the route, as well as those interested in ocean steam navigation. In addition to these, and other persons of note, we learn that invitations will be given to all the Foreign Ministers at Washington, to the Governors of Nova Scotia and New Brunswick, etc., etc. Three days at least are to be devoted to this great railway and steamship jubilee. There will be processions, addresses and banquets, probably a review of the troops, and grand excursions in the harbor by the new and splendid ocean steamer, the S. S. Lewis, escorted by all the steamboats in this quarter, followed in the evening by fireworks from the wharves at South Boston and Boston proper, from East Boston and Charlestown, Chelsea and the islands; all the vessels in the bay being at the same time illuminated by means of variegated lanterns, and having on board parties of ladies and gentlemen, and bands of music. This pyrotechnic and aquatic part of the display will be the most novel and magnificent public spectacle of the kind ever witnessed in the United States, and will no doubt draw together a vast crowd of citizens and strangers. The time for this extraordinary ovation has not yet been decided upon. It depends mainly upon the day of the arrival of the new steamship, and the opening of a connecting portion of one of the upper railways." In the mean time, says the same paper, *Honorable Francis Brinley*, President of the Common Council of Boston, one of the "most distinguished and illustrious of her citizens," with a large train of attendants, left that town on Saturday last, for the purpose of making arrangements with the various railroads that are to take part in the OVATION. Mr. Brinley will visit the Canadas, for the purpose of inviting the great Earl of Elgin and Kincardine, Knight of the Order of the Garter, K. B., M. G. G.,\* etc., a kinsman to Earl Grey, and other officials.

The same paper, our friend the Courier, running over with joy at the prospect of coming events, states that there are now being manufactured in

\* The cabalistic letters, K. B., we shall not attempt to decipher. M. G. G. means *Moving Governor General*.

that city "three new steam drills, to eat their way into the hidden recesses of the Hoosac mountain, and wake up the slumbering beds of rock and iron ore, which now obstruct the most practical line of intercommunication between the ocean and the inland commerce of the illimitable west. Yankee skill and persistence must and will 'put the tunnel through,' to the astonishment of the Rip Van Winkles and Domine Sampsons of the nineteenth century." These terrible engines will, we presume, be retained in Boston to form a part of the sublime pageant which is impending. Upon the very culminating moment of this great day, these monsters will "let sliver" upon some impenetrable mound of brick bats or hard coals, for the purpose of showing to the astonished beholders the perfect annihilability of matter.

In view of all this we were perfectly overwhelmed, and had settled back into our chair, exclaiming—"New York must give it up now. It is no use."—We saw the Green Mountains "suddenly hide their diminished heads." Boston loomed up as the only visible spot in creation, and New York was returned upon the parchment of history, as *non est inventus*. Who could resist, thought we, the charm of variegated lanterns; fire works from South Boston, Boston proper, the Common, from Charlestown, Chelsea and the Islands; the review of troops thundering past with deafening tread; the presence of the President of these United States, the Governors of the six New England States, distinguished merchants, men of note, the Governors of Nova Scotia and New Brunswick, the Governor General of the Canadas, the Earl of Elgin and Kincardine, Knight of the Garter, "kinsman to Earl Grey?" "Who can resist these," said we—"nobody," "nobody;" or if any could, they are good-for-nothing trash, not even worth having.

We should probably never have recovered from our syncope; but luckily we happened this morning to read an account of the recent war between Great Britain and China—and there we thought we saw a slight parallel to the case before us. On one occasion, the English sailed up one of the Chinese rivers; and to frighten back the "Barbarians" "they (the Chinese) displayed a vast number of variegated lanterns, wrought with the most frightful devices." Against these foes the Englishmen bravely pushed their way; but when morning came they found themselves in a pickle, sure

enough. As soon as the light dawned, they could see all the surrounding heights bristling with cannon, threatening destruction with the first step onward. The invaders were nonplussed, and about to retreat, when an officer, out of curiosity, took his glass for the purpose of examining these instruments of destruction. Soon to his astonished view the cannon resolved themselves into good sized earthen pots, with their muzzles directed toward the shipping, and so skilfully arranged as to deceive the naked eye. Upon this discovery John Bull plucked up, and pushed ahead. His example brought comfort and courage to us. Upon a second look, we thought we could discover, now and then, an earthen pot, where we looked for true metal. We breathed freer, feeling that after all New York is something. Still we hope with trembling. As in the story of the bull pitted against the horse in the race—we can't say how fast the brute may run. *Lanterns* have a strange faculty of making everything invisible but themselves. We have tried the catching of birds this way, and always found it more successful than by "putting salt on their tails." Think of the *men of note* that are to be there: distinguished merchants; Presidents of railroads; the President of the United States; six Governors of States; two Lieutenant Governors of Provinces, and one Governor General, the "Earl of Elgin and Kincardine, and kinsman to Earl Grey" (what more conclusive proof is wanted that such a man is always in the right) to cap the lofty pedestal. Think of all these "calamities" happening in conjunction at the same instant, and at the very climax, the "THREE STEAM DRILLS" knocking a pile of luckless bricks into the middle of next week, (by way of showing what sport they would make with the rock ribbed hills,) and Marshall Tukey and his assistants vainly endeavoring to preserve order among the fragments. But the occasion is too great for description. We can only sketch the leading outlines, we must then leave the pageant to the general conception.

Still, while we tremble for New York in particular, and generally for all our other cities, we are determined to be present at the *ovation*. It is cowardly to attempt to keep the future from our view, however dark it may appear. At first we doubted whether we were included in any of the different ranks to be invited; but we believe we can slip in under the category of "men of note." We sometimes take note of passing events—under this section, therefore, we make our claim to an invitation, and are prepared to "show good reasons," if necessary. If we shall be disposed to find fault, or make ourselves merry at anything we may see, we shall ascribe it to feelings of envy and jealousy at the rising greatness of Boston.

#### Important to Shippers.

In the last Cincinnati Prices Current, a valuable and well conducted sheet, we find a long letter from Messrs. J. C. Chenoweth & Co., merchants of that city, urging the superior cheapness of the northern route to shippers of western produce. The following extract from their letter is deserving the attention of our readers:—

"The advantages of the northern route to New York over that by New Orleans, are vastly superior. By the northern route tobacco is delivered in New York in from thirty to thirty-five days, in as good order and condition as when shipped. It is delivered dry and free from sweat, and opens a hundred per cent better than that shipped by New Orleans, which requires double the time to arrive in New York. Tobacco shipped by New Orleans is nearly always injured to some extent from the

sweat caused by heating in the hold of the vessel, which uniformly happens from the great heat of the weather in that latitude in this season of the year. We subjoin the cost of transportation on a single hhd. by each route, say by Louisville:—

#### BY NORTHERN ROUTE.

Dray in Louisville.....	25
Freight to Cincinnati.....	1 00
Charges to Cincinnati.....	50
Freight by Canal, Lake.....	7 75
Insurance.....	1 12

\$10 62

#### BY NEW ORLEANS—

Dray, Louisville.....	50
Freight to New Orleans \$3 to \$3 50, say.....	2 50
Insurance to New Orleans.....	62
Charges in New Orleans.....	1 75
Freight by ship.....	7 00
Insurance to New York.....	2 00

\$15 12

Showing a difference in favor of the Lake route of \$4 50. We are now shipping tobacco to New York at 50 cents. per 100, thirty days. In connection with this, we would call the attention of the shippers in the interior, whose shipping point is Louisville, to the fact that in addition to the old established warehouses, there is now in course of construction, by Messrs. Watkins and Rowland, Louisville, a new tobacco warehouse, 190 by 130 feet, fire proof, which will be soon finished. It is well located in the vicinity of the Galt House, and will be a fine house for selling or re-shipping. They are gentlemen, and will give entire satisfaction.

#### Railroads in Prussia.

The editor of the New York Tribune, in one of his recent letters from Europe, says:—

A Prussian railroad has four classes of cars. The first class is quite elegant and expensive, but used only by invalids and noodles, or very inexperienced travellers; the second is as comfortable, and should be taken for long distances when one has ladies in company; a healthy, solitary, masculine traveller should take a seat in the third, which is not cushioned, but clean and well-ordered; by so doing he will save money, paying about one half the price of first class, and see much more of the manners and nature of the people; nor need any one fear to tarnish his respectability—even a thin, cutaneous respectability—by riding here. If he edges away too much from the poor fellow at his right, he may crowd a learned professor, or wealthy merchant, or sensible traveller, on his left. The fourth class is simply an open box. In the first and second class one compartment is set apart for smokers; in the other two one smokes at will. They are well ventilated, however, in fair weather, and one who dislikes tobacco smoke will escape the annoyance by taking a seat near the windows. I preferred meeting the enemy on their own ground, have taken up smoking, and find it pleasant, not only as a post-prandial recreation, but as a ready means of acquaintance.

I cannot tell how many conversations of value have had their beginning in the offer of a cigar or the request for a light. The conductors (there is one to every three cars) pass on the outside of the cars along a little platform, on which passengers have not, as with us, the privilege of standing and breaking their necks. Between stations the doors are locked. Tickets, which must be bought at the stations, give the class, the price, the day of the month, and the distance which you are to go, and a reference to the regulations of the country which are posted in the cars. The conductor checks, by tearing off the end of them. There are waiting-rooms at the station houses, but you are not allowed to go out near the track until the cars are come to a full stop. The regulated speed is a mile (Prussian) in sixteen minutes, less than twenty of our miles per hour. An exception is made in favor of certain express trains. Watchmen stand along the track at intervals of two hundred rods. The "rules and regulations" are made and enforced by the general government. All persons connected with the road wear a plain uniform. So far as I have seen, and I have taken some pains to look, they are perfect in their offices; I have found many of them,

when off duty, to be intelligent men, and very ready to furnish any information in their power. One of them assured me that in eight years, no accident, not even the breaking of small bones, had occurred between Bonn and Cologne, a distance of eighteen miles, travelled by six daily trains. Regulations analogous to the above, govern the steam navigation of the Rhine, and similar ones rule most of the public conveyances in France. It is true that our American companies could ill afford to employ at American wages (may they never be less) so large a number of persons as are attached to these European ones, and it is also true that Americans, not having passed their whole lives and conducted all their affairs under a strict government tutelage, are better able to take care of themselves, in all the business of life, than a people who speak and move only as the law directs. It is true that the little peccadilloes of competing hackmen are better than the stricter propriety, whose observance is only a severely constrained virtue. But still we might surely take good hints towards improvement in some regards from these French and Prussians—*fas est do ceri, &c.*

#### Mining in Great Britain.—No. III.

The ores, or, as the miners term them, *hures*, are all dressed by women and boys, who cob them, pick them, jig them, buck them, bundle them, and spall them, as they may require; but as these terms of art may not be altogether intelligible, the process may be described in humbler words. In order to prepare *copper ores* for market, the first process is, of course, to throw away the deads, or rubbish, with which they are unavoidably mixed; and this operation is very cleverly performed by little girls of seven or eight years of age, who receive 3d. or 4d. a day. The largest fragments of ore are then *cobbed*, or broken into smaller pieces by women; and, after being again picked, the whole is divided into—1. *Prills*, or lumps of ore.—2. *Drage*, or ore mixed with other substances.—3. *Halvans*, hennaways, or leavings, which contain but a small quantity of ore. The *prills* are given to what the Cornish miners call *maidens*—that is, to girls from 16 to 19 years of age. These maidens *buck* the ores—that is, with a bucking iron, or flat hammer, they bruise them down to a size not exceeding the top of the finger, and this portion of the ore is fit for market. The *drage*, when containing but little iron pyrites, is *bucked* to a smaller size than the *prills*, and then jigged, either by machinery or by little boys, who shake them into a sieve under water. By this means it is separated into four parts—1. That which passes through the sieve and is usually fit for sale, called *hutchwork*.—2. The portion at the bottom of the sieve, called *ragging*.—3. The middle part of the contents of the sieve, which is again *bucked and jigged*.—and 4. That at the top of the sieve, which is put among the *halvans*, or refuse. Some of the ores of copper are so soft that exposure to water would occasion loss, in which case they are fit for the market, after being sifted, cobbed and picked. The *halvans*, hennaways, or leavings, are the refuse from the preparation of the *crop*, and, when not much mixed with iron pyrites, those portions which contain the greatest quantity of ore are *bucked and jigged*, but when mixed with foreign substances, of great specific gravity, they are *cobbed* and picked. The portions that contain but little ore are *stamped*, and the stamped work is *trunked*; the larger particles of the *trunked* ore are *tyed*.

The dressing of *tin ores* is altogether a different process, because not only are the ores perfectly different, but the method of smelting them is also so different, that it is necessary the tin should be reduced to the finest powder, while copper ore is smelted in small lumps. The tin ore, after being picked, and separated from the *deads* by vanning, is thrown into a stamping-mill, where it gradually falls under a number of piles, or beams of wood, shod with iron, which are worked vertically up or down—generally by a water-wheel. As it is necessary that the ore should be bruised to a very fine powder, the bottom of the stamp is surrounded by a very fine copper sieve, and water being made constantly to flow through this, the ore can only escape when it is fine enough to pass with the water through the interstices of the sieve. It then settles into a very fine mud, which is composed of metallic particles, and powdered quartz-rock, &c. This



mud undergoes a very ingenious process, which the miners term *buddling*. The metallic, and other particles, are all of different specific gravities; and the dresser, being aware of this, places the mud at the top of an inclined plane, and gently working it about, allows a small stream of water to run over it. In a short time the inclined plane is all equally covered with the mud; and although, to any person who has not been brought up to the business, the whole mass has the same appearance, yet the dresser is able to distinguish, and to draw a line between, the heavy metallic particles which have remained at the top of the inclined plane, and the worthless ones which, from being lighter, have been washed towards the bottom. After separating the one from the other, the worthless part is thrown away, and the metallic part buddled again, and the process is repeated until the mass retained consists almost entirely of metallic particles. But these particles, which are as fine as flour, are not all tin; generally many of them are composed of mundic (the sulphuret of arsenic); others are copper; and as the difference between the specific gravities of these three metals is not sufficient to separate them by buddling, or washing, it becomes necessary to roast the mass—an operation which the dresser does not himself perform. As soon as the mass is placed in a surface, and subjected to a proper degree of heat, the sulphuret of arsenic goes off in white poisonous fumes, or smoke, and the specific gravities of the different particles of copper and tin are so altered by the action of the fire, that upon being taken out of the furnace, and again delivered to the dresses, he finds that, in the course of carefully buddling the mass on the inclined plane before described, the particles separate—the tin, which is the heaviest, being left upon the upper part, while the copper is at the bottom. The tin is then packed in bags and sold; and being nearly pure metal, it requires, in comparison to copper ore, so little fuel, that it is all smelted in Cornwall.

Whoever compares together the two processes of dressing copper and tin ores, must be satisfied that they are completely different affairs; and in Cornwall, accordingly, it is perfectly well understood that they form different trades. The ores are so dissimilar, and require such different modes of treatment, that the experience which the labourer gains in dressing the one, is of no possible use to him who dresses the other. It is true, that both sets of people are called *dressers*, but it does not follow that for that reason, they can all dress *anything*; and to desire a copper dresser to dress tin ores would, in Cornwall, be considered as preposterous as if one were to send him to Aldersgate-street to dress a turtle, or to St. James's-square to dress a duchess.

But it is time that the *underground captains* should come to *grass*, and that the whole body of subterranean laborers should be released; and those who have attended to their labors throughout the day will scarcely regret to see them rising out of the earth, and issuing in crowds from the different holes or shafts around—hot, dirty, and jaded—each with the remainder of his bunch of candles hanging at the bottom of his flannel garb.

As soon as the men come to *grass*, they repair to the engine house, where they generally leave their *underground clothes* to dry, wash themselves in the warm water of the engine pool, and put on their clothes, which are always exceedingly decent. By this time, the *maidens* and little boys have also washed their faces, and the whole party migrate across the fields in groups, and in different directions, to their respective homes. Generally speaking, they now look so clean and fresh, and seem so happy, that one would scarcely fancy they had worked all day in darkness and confinement. The old men, however, tired with their work, and sick of the follies and vagaries of the outside and inside of the mining world, plod their way in sober silence—probably thinking of their supper. The younger men proceed talking and laughing; and, where the grass is good, they will sometimes stop and wrestle. The big boys generally advance by playing at leap-frog; little urchins run on before to gain time to stand on the heads—while the "*maidens*," sometimes pleased and sometimes offended with what happens, smile or scream, as circumstances may require. As the different members of the group approach their respective cotta-

ges, their numbers of course diminish; and the individual who lives farthest from the mines, like the solitary survivor of a large family, performs the last few yards of his journey by himself. On arriving at home, the first employment is to wheel a small cask in a light barrow for water; and, as the cottages are built to follow the fortunes and progress of the mine, it often happens that the miner has three miles to go ere he can fill his cask. As soon as the young men have supped, they generally dress themselves in their *holiday clothes*,—a suit better than the *working clothes*, in which they walk to the mines; but not so good as their *Sunday clothes*—in fact, the *holiday clothes* are the *Sunday clothes* of last year; and thus, including his *underground flannels*, every Cornish miner generally possesses four suits of clothes.

The Sunday is kept with great attention. The mining community, male and female, are remarkably well dressed; and as they come from the church or meetings, there is certainly no laboring class in England at all equal to them in appearance, for they are naturally good-looking. Working away from sun and wind, their complexions are never weather-beaten, and often ruddy; they are naturally a cheerful people, and, indeed, when one considers how many hours they pass in subterranean darkness, it is not surprising that they should look upon the sunshine of the Sabbath as the signal, not only of rest, but of high and active natural enjoyment.

To show the great advance in the system of mining, the following extract, from a communication made to the Royal Society in 1671, is exceedingly curious.—(*Phil. Trans.*, vol. 6, page 2087.) After describing the steps which were taken, in order to discover lodes, the writer proceeds:—

"When we have found one lode, the last *assay hatch* (costeasing pit) exchanges its name for that of a *tin shaft*, or *tin hatch*, which we sink down about a fathom, and then leave a little long square place, termed a *shamble*, and so continue sinking from east to east—i. e., as high as a man can conveniently throw up the ore with a shovel—till we find either the lode to grow or degenerate into some kind of wild, as mundic, or maxy, &c.; then we begin to drive east and west, as the goodness of the lode or convenience of the hill invite, which we term a drift, 3 ft. over, and 7 ft. high; but, in case the lode be not broad enough of itself, then we usually break down the *deads*, first on the north side of the lode, for the greater convenience of the right arm in working, and then we began to rip the lode itself. The *heellmen* rip the *deads* and ore; the *shovelmen* carry it off, and land it by casting it up with shovels from one shamble to another, unless it be when we have a winder with two kibles, or great buckets, made like a barrel, with iron hoops, placed just over the then termed *wind hatch*, which, as one comes up, the other goes down. When we are come to any depth, and find the water begin to annoy us, we descend to the bottom of the hill, when we have that convenience, and at the lowest place begin a little drift on a level, till we come up to our work; but when we once pass that level on which our adit runs, and the water begins to trouble us, we have this remedy—either with winder and kibles, or leathern bags, pumps, or buckets, to get it up to the adit level, and so we are enforced to do to the very top, when we have not the convenience of an adit."

#### English Railroads.

**Railway Traffic.**—The gross traffic receipts on railways in the United Kingdom during the first twenty-four weeks of the year 1850 amounted to £5,291,235, being at the rate of £979 per mile. At the corresponding period of 1849, the receipts amounted to £4,664,032, being at the rate of £1,020 per mile; of 1848, to £4,136,837, being at the rate of £1,127 per mile; of 1847, to £3,654,196, at the rate of £1,273 per mile; and at the same period of 1846, to £3,172,950, being at the rate of £1,477 per mile. The aggregate length of the railways open over which the traffic was carried at the end of the twenty-four weeks in 1850 was 5,560 miles; in 1849, 4,711 miles; in 1848, 3,804 miles; in 1847, 3,021 miles; and at the end of the period mentioned, in 1846, 2,232 miles. The increase in the receipts during the twenty-four weeks in the present year, over those of the corresponding period in 1849 amounted to £627,203; the increase in the receipts

during the same period in 1849 over the preceding year was £527,195; in 1848 over 1847, £482,641; and in 1847 over 1846, £481,245. In the mileage the increase at the end of the twenty-four weeks in 1850 over the corresponding period of 1849, was 849 miles; in 1849, 907 miles; in 1848, 773 miles; and in 1847 the increase of mileage over the end of that period, in 1846, was 799 miles. The diminution in the receipts per mile for the twenty-four weeks, as compared with those of the preceding year, amounted in 1850 to £41; in 1849, to £107; in 1848 to £146; and in 1847, to £204, making the total diminution of receipts per mile during four years, £498, or about 34 per cent. It appears from the above that a considerable improvement has taken place in the traffic receipts per mile during the present year, which is attributed in a great measure to the comparative falling off in the mileage opened, which for the present year shows an increase over the preceding one of only 18 per cent., while in 1847 it amounted to 35.8 per cent. of the mileage open in the preceding year.

#### Canal Certificates.

We give below an article, put forth by the friends of the enlargement, showing the financial system of the state, the amount of its debt, and the means provided for its extinguishment. It is intended also to show the safety of the new issues of canal certificates:

The Constitution of 1846 sets apart a large portion of the canal tolls to form two Sinking Funds for the payment of the State debt. The amount taken from the canal revenues for these sinking funds is \$1,650,000 per annum; and after June 1, 1855, the contribution is to be increased to \$2,050,000 per annum. It seems to be forgotten by some that under this sinking fund system our present debt will be steadily reduced, and in a few years extinguished. The amount of the canal debt at the end of the present fiscal year (September 30, 1851) will be.....\$15,301,109 16  
Add general debt..... 6,359,693 32

\$21,660,802 48

The canal debt will be paid off by the sinking fund in 1866, and the entire State debt will be extinguished in 1869 or 1870. These results are mathematically certain. Thus it will be seen that in less than 20 years (if the revenue certificates shall not have been sooner paid from the surplus), the entire amount of the annual contributions from the canal revenue to the sinking fund, being \$2,050,000 per annum, will then be released, and made applicable, by express Constitutional injunction, to the payment of the certificates.

The most unfavorable view that can be presented, by any possible sophistry or ingenuity, is that the payment of the revenue certificates may be deferred in part until after the present debt shall have been paid by the sinking fund.

I contend, however, that if our past experience is to be regarded as a safe foundation for forming calculations respecting the future trade of the canals, the surplus tolls will be sufficient to discharge the revenue certificates even sooner than the old debt will be extinguished by the sinking funds. On this point facts and figures are more satisfactory than theoretical estimates. Let us look at the actual amount of canal tolls for the first four fiscal years under the new Constitution:

Year ending Sept. 30,	1847.....	\$3,460,975 92
" "	1848.....	3,153,614 24
" "	1849.....	3,377,781 27
" "	1850.....	3,390,475 63

After paying from these revenues the expense of superintendence and repairs, \$1,650,000 to the sinking funds, and \$200,000 to the general fund, the net surplus applicable to the unfinished works was as follows:—

Year ending Sept. 30,	1847.....	\$981,834 52
" "	1848.....	498,219 52
" "	1849.....	907,102 71
" "	1850.....	800,206 49

Total.....\$3,187,363 24  
—being an average surplus of \$796,590 81 per annum.

Does any one apprehend that the actual surplus

in any future period will be less than the average for the last four years?

The results of the present year are sufficient to settle the question.

Amount of toll received from 1st Oct., 1850, to the 3d week inclusive in July, 1851, was.....\$3,150,632 87  
To the same time in 1850..... 2,836,762 73

Increase over previous fiscal year... \$313,870 44

It must be remembered, in connection with this large increase, that there was a reduction of tolls on flour and wheat at the opening of the canals in April, of 25 per cent.

It has been contended, however, that the future revenues are to be impaired by the recent act releasing the railroads from the payment of canal tolls, after the present year. Those who are familiar with the business of the great west, its constant increase in population and production, and the rapid extension of railroads and canals, which must draw trade towards the New York market, indulge no such apprehension. It would be impossible for the railroads to transport the actual increase of tonnage, from year to year, from the country beyond the lakes.

At the opening of the navigation next spring, the Wabash and Erie canal will have been extended from Terre Haute to the Ohio, thus completing the longest canal in the United States, passing through a country of unsurpassed fertility. The extension of this canal from Terre Haute to the Ohio, will of itself bring more trade than the railroads can carry.

Similar improvements now in progress in Ohio, Michigan, Indiana, Illinois, Wisconsin, Iowa, etc., will add immensely to the commerce of the lakes. There are other elements of increase so well known and understood, and so strikingly illustrated by our present weekly returns, as to render comment unnecessary.

The only remaining objection is, that the State is not liable for the payment of the certificates as an ordinary debt. If it is true that the liability of the State is limited to an obligation to regulate the canal tolls, so as to produce the largest amount of revenue, and then to apply the surplus, after discharging the prior liens created by the Constitution, to the payment of the certificates, in this undertaking the State assumes a trust of the highest obligation. The principle of good faith so uniformly recognised and acted upon by our people, is a sufficient guarantee for its honest performance. Independent of every consideration of moral duty, inasmuch as the certificates are to be made the basis of currency, the whole people will be directly interested in maintaining the revenues and in their faithful application. Let us compare the revenue certificates with the railroad companies in which such large amounts of capital are invested. What is the security for the payment of railroad bonds—for instance, the second or third bonds of the New York and Erie railroad company? They rest entirely upon the income of the road.

The lender parts with his money upon his faith in the sufficiency of the trade and revenue of the line, and this in effect is his only safety. There is personal responsibility of shareholders. Their liability, like that of the State in the case under consideration, is limited to the faithful administration of the concern, and the honest application of the revenues. If the income is sufficient, the bonds are paid—if not, not.

It may be said that the corporate property of the railroad company is pledged, but the value of the property is measured by its net income; and if the income be inadequate, a resort to the property is of no avail, beyond the intrinsic value of certain real and personal effects, which in that contingency would be swept by the first mortgage.

It has been shown that the canal revenues will be amply sufficient to provide for the redemption of the certificates, without any increase of tolls over the average amount realized for the last five years. Whether the future tolls will fall below that average, or advance largely beyond it, especially after the enlargement shall be completed, is a question which addresses itself to the common sense of practical business men, who are competent to reason and decide for themselves on a proposition which has been so fairly tested by our past experience.

It has been said that the admission of the Canal certificates as a basis for banking will lead to a dangerous expansion of the currency. A candid examination of the subject will show that this apprehension, like the one we have already discussed, is altogether imaginary. It must be remembered that our present state debt, which is now employed as a basis for circulation, will be redeemed more than half a million annually, until 1855, and after that period more than a million annually. Simultaneously with this reduction of the present basis, the charters of the Safety Fund Banks are gradually expiring. The capital of the banks whose charters will expire in less than 2½ years is \$9,143,200. If these institutions continue business, they must deposit security with the bank department for the redemption of their circulation. If they decide to wind up, new institutions must be formed to take their places, and in either event the canal revenue certificates will be barely sufficient to supply the vacuum.

#### Railroads in 1811.

The following letter, recently communicated to the National Era, contains the views of Chancellor Livingston, of New York, who wrote it in answer to a gentleman who had addressed him, asking his opinion with deference. Chancellor Livingston was a great man in his day:—

"ALBANY, March 11, 1811.

"Dear Sir,—I did not till yesterday receive yours of the 25th February; where it has loitered on the road I am at a loss to say. I had before read of your very ingenious propositions as to the railway communication. I fear, however, on mature reflection, they will be liable to serious objection, and ultimately more expensive than a canal. They must be double, so as to prevent the danger of two such heavy bodies meeting. The walls on which they are placed must be at least four feet above the surface, and three below, and must be clamped with iron, and even would hardly sustain so heavy a weight as you propose moving at the rate of four miles an hour on wheels. As to the wood, it would not last a week. They must be covered with iron, and that, too, very thick and strong. The means of stopping these heavy carriages without great shock, and of preventing them from running upon each other, for there would be many upon the road at once, would be very difficult. In case of accidental stops, or the necessary stops to take wood and water, etc., many accidents would happen. The carriage of condensing water would be very troublesome. Upon the whole, I fear the expense would be much greater than that of canals, without being so convenient."

#### Railroads in the Provinces.

We find in the Provincial paper the official report of the results of the Hon. John Howe's mission to Canada, and New Brunswick, upon the subject of the Quebec and Halifax railroad. After speaking of the efforts he had made for the promotion of his scheme, he gives the following as the result of the conference between the representatives of the three Provinces, and the reasons which influenced their determination, viz:

That the line from Halifax to Quebec should be made on the joint account and at the mutual risk of the 3 Provinces, 10 miles of Crown Land a mile the line being invested in the joint Commission, and the proceeds appropriated towards the payment of the principal and interest of the sum required.

That New Brunswick should construct the Portland line, with the funds advanced by the British Government, at her own risk.

That Canada should, at her own risk, complete the line from Quebec to Montreal, it being understood that any saving which could be effected within the limits of the sum which the British Government are prepared to advance, should be appropriated to an extension of the line above Montreal.

That, on the debt contracted on the joint account of the three Provinces being repaid, each should own the line within its own territory.

It was also understood that Canada would with-

draw the general guarantee offered for the construction of railways in any direction, and that her resources should be concentrated upon the main Trunk Line, with a view to an early completion of a great inter colonial highway on British territory, from Halifax to Hamilton: from whence to Windsor, opposite to Detroit, the Great Western company of Canada have a line already in course of construction.

The final adoption of this great scheme of inter-colonial policy now rests with the people of Nova Scotia, to whom it is probable that it will be submitted by a dissolution of the Assembly at an early day. I have pledged the Government to it beyond recall. I have staked, upon the generous and enlightened appreciation of their true interests by my countrymen, all that a public man holds dear.—Having done my best to elevate Nova Scotia in the eyes of Europe, and of the surrounding Colonies, I have no apprehension that she will repudiate the pledges which I have given.

Her clear interest demands the prompt acceptance of the proposition—

1st, Because it secures to her, within very few years, a railway communication of 1400 miles, extending through the noble territory of which she forms the frontage, and with which her commercial, social and political relations, must be very important in all time to come.

2d, Because it gives her almost at once, connection with 8000 miles of railway lines, already formed in the United States—makes her chief seaport the terminus for ocean steam navigation, and her territory the great highway of communication between America and Europe.

3d, Because, on the extinction of the debt, she will possess a road with which there can be no competition within the Province—a road towards which two great streams of traffic must perpetually converge, and the tolls upon which must become a source of revenue, increasing with each succeeding year.

4th, Because the completion of these great lines of communication will give to all the North American Provinces a degree of internal strength and security, and consideration abroad, which will far transcend any pecuniary hazard which may be incurred.

5th, Because the completion of these lines will draw into the Province much of the surplus labor and capital of Europe.

6th, Because, the line from the seaboard once completed to Canada, there cannot be a doubt that it will soon be extended into the fertile and almost boundless country beyond; being followed, at every advance, by a stream of Emigration, and ultimately, and in our own time, reaching the shores of the Pacific.

It may be argued that we ought not to risk any thing beyond the limits of our own frontier. But I regard the risk as involving a very slight liability beyond what we have already cheerfully assumed.

All our calculations have been based upon the presumption that our roads will cost £7000 currency per mile. From the best information which we could obtain in Canada and in the United States, and we gather the opinions of the chief promoters of the Vermont, Great Western, Portland, and St. Andrews Roads, there is every reason to believe, if the Provinces avail themselves of the most modern experience, and of the present low price of iron, that with the money in hand, and large contracts to offer, the work need not cost much more than £5000 currency per mile. Should this be the case, the sum which was originally contemplated will probably cover the whole expenditure for which Nova Scotia will be liable; and, if it does not, with her present low Tariff, and annually increasing consumption, the deficiency may soon be supplied.

But, after a careful examination of the country traversed by American and Canadian railroads, and of the general testimony borne by their promoters and officers, that in all cases the money with which they have been constructed has cost from eight to twelve per cent., I have brought my mind to the conclusion that a railway built with money at 3½ per cent., will pay almost immediately even if made through a wilderness, provided the land be good, water power and wood abundant;



and provided that there are formed settlements at either side, to furnish pioneers and local traffic with them, when they are scattered along the line. We have other resources beyond our own limits, in associations of the industrial and enterprising, who are prepared to come into the Provinces the instant these great works are commenced, and who within the limits at least of the lands dedicated to this enterprise, will soon form a continuous street, through that portion of the territory between our frontier and the St. Lawrence, which appears to present any really serious hazard.

In estimating the relative risks and advantages which this scheme involves, it should also be borne in mind, that whilst Nova Scotia has but little Crown land left along her portion of the line (and this has been frankly explained) the lands which Canada and New Brunswick are prepared to grant are extensive and valuable. They will probably amount to 3,000,000 of acres, which, if sold at 5s. an acre, (and with a railroad running through them they will soon command a much higher price,) would form a fund out of which to pay the interest on the whole capital expended for the first three or four years.

#### Railroad Matters in Boston.

We have to record a new "Boston Notion."—Mr. Mayor Bigelow, in behalf of the Committee of Arrangements, has issued an official bulletin, announcing that the City Government of Boston proposes to celebrate in an appropriate manner, the final completion of the great lines of railway uniting the tide-waters at Boston with the Canadas and the great West, also the establishment of American lines of steamers between Boston and Liverpool.—He says there are now completed and in operation, in Massachusetts alone, about 1,200 miles of railway; and in New England 2,400 miles. Massachusetts alone has expended in the completion of these roads, the enormous amount of \$54,000,000; and it appears from the reports of the several railroad corporations in this State, made to the last Legislature, that there were transported over the Massachusetts roads alone, during the year 1850, 9,500,000 passengers, and 2,500,000 tons of freight. But this is not all. The several lines connecting us with the Canadas, northern New York, the great lakes and the far West are now completed, uniting us by railroad and steam navigation with thirteen States of the Union, comprising an area of 428,795 square miles; the two Canadas, the lakes, with their five thousand miles of coast; and bringing within our commercial sphere a population of ten millions of inhabitants. And if we look for a moment at the business of the lakes and the Canadas, and observe its rapid yearly increase, we shall be still more astonished. It is estimated that the imports and exports of the Lake Harbors, exclusive of the Canadas, during the present year will be two hundred million dollars. The annual increase of this business is found to be 17½ per cent.; thus doubling itself in less than six years. In addition to this, the imports and exports of the Canadas will amount during the present year to fifty millions of dollars.

The advantages which Boston possesses for doing this immense business, are then described, and a comparison instituted between Boston and New York as eligible shipping ports for the Canadas and export cities for the West, as follows, viz:—

	To Boston.	To N. York.
Distance from Liverpool via Halifax.....	2876 miles.	3093 miles.
Distance from Liverpool direct.....	2856 "	3073 "
Distance from Halifax..	368 "	580 "
Distance from Montreal..	344 "	398 "
The distance from Liverpool to Montreal via Boston is.....	3200 "	
While via New York it is.....	3471 "	

The difference between Liverpool and Montreal in favor of Boston over New York, is two hundred and seventy-one miles.

The celebration is to consist of a Festival in Faneuil Hall, and other appropriate ceremonies; and it is proposed to invite to be present on that occasion, the Governor-General of Canada, his Aid and Cabinet; the leading members of the Ca-

nadian Parliament, the Corporation of Montreal, the leading merchants in all the Canadian cities, and Ogdensburgh, the President of the United States and his Cabinet, the Governors of New England States, the Presidents of all the Railways in New England, the Mayors of the cities of New England, and others interested in railways and steam navigation.

#### Tehuantepec Railroad.

It appears to have been the generally received opinion of the New York press, that the Mexican Government were justified in annulling the Tehuantepec Treaty, by which the progress of the above road seems likely to be delayed, if not defeated altogether—that the conditions of the same not having been complied with, Mexico was under no obligation to carry it out on her part. On the other hand, the New Orleans papers take the ground that the company has lost none of its privileges, that it possesses the right to proceed with the road and that the Government of the United States is bound to protect it in so doing. They state that the recent operations were commenced under guarantees of protection from the Mexican authorities; that our citizens have become stockholders in the work to a large amount; that "they were induced to engage in the undertaking by the express as well as implied sanction and encouragement of the Mexican authorities; and now, after the surveying parties have been eight months in the field, and from the explorations that have been made, the most flattering expectations are entertained of a successful termination of this project, so important to the south and west, they are arrested in their proceedings, and forced to abandon their work and quit the country. The arguments used by the apologists of the Mexican Government in its barefaced equivocation, and breach of trust, says the New Orleans Bulletin, are predicated upon the assumed fact, that GARAY, the first holder of the right of way, had failed to meet the conditions attached to his grant, and that the grant was expressly annulled. This is not the fact; but on the contrary the grant in the hands of Garay's assignees, has been expressly recognised and re-affirmed. We care not if the original conditions were not complied with by Garay; the rights of the present holders have been made good by the action of the government, and they are as much to be respected as they were when enjoyed by the original holder Garay, before there was any failure of terms.—The whole affair lies in a nut shell. Has Mexico recognised the grants in the hands of the present holders? There is no room to doubt it; and when the New York papers assert the contrary, they have been misinformed of the true state of the case. We are told, that by the influence of a company of southern capitalists, a proposition in the shape of a treaty was made to the Mexican government, renewing the charter, and pledging, on certain terms, the faith of Mexico and the United States to maintain it inviolate against each other and the world; but that this treaty has never been ratified by either the Senate of the United States, or the Congress of Mexico. Here is a gross mistake; the Senate of the United States did ratify this treaty in March last, by a unanimous vote; and the rights of the actual holder of the grant were expressly recognised, inasmuch, as his acquiescence was required, before the Senate would take any action upon it; and subsequently the assent of the company was obtained to the particular stipulation, when the treaty was formally ratified, and sent on to Mexico, where it was laid over by Congress for want of time

to give it consideration; it has not been rejected by the Mexican Congress.

"On the contrary, the Mexican government has over and over again, recognised and respected the position of the present holders. On one occasion, when effects for the surveying party first passed through Vera Cruz, on their way to the Isthmus, in June, the Custom house at Vera Cruz required the payment of duties. This was refused; security was taken, and a reference made to the Mexican government for its decision—which promptly ordered the goods to pass *duty free*, because these effects belonged to the *Compania Norte Americana*—who were entitled to this privilege by the terms of their grant.

"They (the company) have moreover received formal and official protection from the government, which they never would have had, had they been regarded as invaders or intruders upon Mexican soil.

"Passports, in the form of circulars from the supreme government to the Governors of the States of Vera Cruz and Oajaca, command aid and protection to be given to the engineering party that the 'Compania' might send. These documents were issued sixteen months ago; sent by the Minister of Foreign Affairs to our Representative, Mr. Letcher—by the latter forwarded to the Department of State, whence they were furnished to the company to act upon. Since then, until within the last six weeks, the operations of the surveying party on the Isthmus have experienced no impediment, nor any intimation of opposition made to them."

We hope, and are confident, that the difficulties which now threaten will be removed, and that this work will proceed to a speedy completion. It is without doubt, the best route across the Isthmus for the convenience of our commerce, in addition to its healthiness. Whatever may have been the conduct of Mexico, a little money, in her present poverty stricken condition, will place the matter right again. If she has been in the wrong, she had an object in the course she has taken. If right, she will readily grant all we want for a consideration.

We give the following from a letter of a Mr. Murphy, one of the assistant engineers, showing the character of the route and of the country and its productions:

In reply, therefore, to the statements concerning the Tehuantepec route, I beg leave briefly to assure you that it is quite as feasible as any in the United States; that there are no less than six mountain passes, all admitting of grades not greater than 60 feet; that the road can be built upon a grade of 55 feet to the mile; that a ship canal is by no means impossible; that earthquakes have not occurred on the Isthmus, so far as I am informed; that the lands are incomparably rich, abounding in iron, tin, silver, salt and coal mines, together with mahogany, lignumvitæ, Indiarubber, pine, live oak, and cypress, and every variety of gum trees and dye woods. We may add to these a soil and climate adapted to the raising of rice, cotton, sugar, and tobacco, equal, if not superior to the finest portions of the southern country, and in quantities sufficient, should the Isthmus fall into the hands of foreign capitalists, to injure seriously, if not destroy the American trade to Europe; the existence of an excellent harbor on the Pacific; a magnificent river on this side, navigable for thirty miles for ships; a salubrious and healthy climate; the close proximity of the Isthmus to the United States; the saving of two thousand miles in the voyage to California; the control of the entire India trade, and the market which the States of the south and west must have for their produce on the shores of the Pacific; it is plain, then, that the "invasion" of the Isthmus, so liberally imputed to the engineering party, has been attended with some good results

and that Tehuantepec possesses immeasurable advantages over the pestilential climate, spungy morasses, and barren heights of Panama, or the stagnant lake of Nicaragua.

#### Ohio.

**Columbus, Piqua and Indiana Railroad.**—The portion of this road between Urbana and Columbus has just been placed under contract to different contractors, to be completed in one year from the 1st of September next. Nearly one half of the whole amount of risk let is to be paid for in Township Bonds and stock of the company.

This company was chartered in February, 1850, was organized in April succeeding, and commenced active operations in June. The whole length of chartered line is from Columbus to Winchester, Indiana, 108 miles. Of this distance 89 miles, commencing at Columbus, are now under contract furnishing good evidence of the energetic and competent management. Within a few days the balance of the line is to be placed in the hands of the contractors.

The distance from Winchester by the Indianapolis and Bellefontaine road is 73 miles, making the entire distance by the route between the capital of Ohio and Indiana 181 miles, and from Indianapolis to New York via the Hempfield line, 822, as claimed by the friends of the above road. At a rate of speed of 30 miles to the hour, which is not equal to that of the express trains on some of our roads, this whole distance could be performed in 28 hours!

In this connection we may state that the project of a railroad to connect Piqua with Cincinnati, by way of Eaton, is attracting attention. The route has been surveyed, and a portion of the stock necessary to its construction has been taken. It is claimed that this route is three miles shorter than the one by way of Dayton.

We are happy to be able to give such a favorable account of the Columbus, Piqua and Indiana railroad. Its early completion may now be regarded as a fixed fact. Its success, in no small degree attributable to the enterprising energy of those who have had the management of its affairs.

For the American Railroad Journal.

#### A New and Improved Railroad Project. H. V. Poor, Esq.

Dear Sir: As you are constantly taking note and sending out information of the great railroad movements of our country, I presume that no apology will be necessary for troubling you with a brief account of a line which is about assuming a tangible form in Ohio—another north and south line.

At the last session of the Legislature, an act was passed authorizing the Dayton and Michigan railroad company to construct a road from Dayton through Sidney and Lima to Toledo on Lake Erie.

The company has been organized, and Judge Barbee, of Troy, Miami county, elected President. A corps of engineers has made a survey of the first section from Dayton to Sidney, 36 miles, and report the route as exceedingly favorable in point of grades, straight lines, and cost; and this portion of the line will probably be put under contract this fall.

There is more in this project than would at first appear. From Cincinnati to Dayton, 60 miles, the railroad will be completed and in operation next month. The whole distance from Cincinnati to Toledo is just 200 miles, which is 18 miles shorter than from Cincinnati to Sandusky. But it is not so much in reference to the short connection between Cincinnati and the lake, as from other con-

siderations, that this line will derive its importance.

Trace the line out from Toledo to Maumee city, Monroe, and thence to Detroit—only 253 miles from Cincinnati—and you will find the best possible connection with the Canadian system of railroads, terminating at Detroit. At Perrysburgh or Toledo it will connect with our own Lake Shore improvements. But the point which is likely to make this a prominent route, is its direct connection with the Canadian works, and our southern lines of railroads in Kentucky, Tennessee, etc.

By this route, the distance from Detroit to Nashville will be 200 miles shorter than by the route of the Illinois Central road from Chicago; and the distance to Memphis will be shortened 123 miles. It will give to the Great Miami valley, one of the richest producing regions on the globe, a choice of outlets by the Bellefontaine and Indiana road to Cleveland, and thence to New York or Boston, or through Detroit and Canada.

The construction of this line will bring into more intimate union the warm folks of the south with their colder brethren of the north; and if an iron bond can help to tie people together, it will be the means of strengthening the growing feeling of intimacy between our country and the Provinces north of us. The whole line can be cheaply constructed, and I have no doubt that in the due course of events, you will be called upon to chronicle this along with the other successful railroad achievements of the age.

Yours respectfully,

R.

#### Railroad from Burlington to Peoria.

The citizens of a portion of Iowa and Illinois have organized a company for the purpose of constructing a railroad between the two towns named above, the former of which is on the Mississippi, the latter on the Illinois river. These towns are among the most thriving and prosperous of any that are to be found in the fertile west. They are nearly equal in size, each containing between five and six thousand inhabitants, both rapidly increasing, and each the focus of a populous and wealthy district of country. The road is to be nearly 100 miles in length, passing through one of the most fertile regions in the state of Illinois, a region in other respects highly favorable to the construction of a railroad.

This is the third railroad now in progress of construction, which is intended to strike the Mississippi river opposite the shore of the new state of Iowa. One at the north points at Du Buque, one at the centre in the direction of Rock Island, and this which aims at the commercial metropolis of Southern Iowa.

An idea of the importance of this road can be formed from the fact, that the returns of the last census show that nearly two-thirds of the population of the entire state is contained in the three Southern tiers of counties. Burlington is nearly in the middle of these three tiers of counties, measuring on their river front. A plank road is already nearly completed, extending from this town to Mount Pleasant, which is almost thirty miles in the interior. This is to be continued to Fairfield which is near twenty-five miles further, with branches extending to the right and left; for all which companies are already formed and the work in progress. Similar roads are also about to be constructed, radiating from Burlington in different directions.

The concentration of population in Southern Iowa, is a good indication of its agricultural ad-

vantages, which are said not to be exceeded by those of any portion of the west. But a considerable portion of this region has long been laboring under a serious commercial difficulty. Near the southern limit of Iowa is the most considerable rapid in the Mississippi river, below the falls of St. Anthony. At high water these rapids are passed without difficulty, but generally for a considerable portion of each season, they are a very serious obstruction to the navigation, rendering it necessary to carry over freight in lighters, and sometimes forming an almost impassable barrier to navigation.

The railroad in question, opens an outlet for the trade of Southern Iowa to the Illinois river, but it is not intended to stop there. Forty miles from Peoria, the road, when constructed, will strike the great Central railroad of Illinois, which will place that region of country in immediate connection with the general system of railroads in the country, and will form one of the most important tributaries to the different lines of railroads leading to this city. We hope in a few years to see the agricultural products of Iowa brought direct to this market through this channel, and our commercial products returning by the same route.

Burlington, Iowa, August 4th.

#### Illinois.

**St. Charles and Mississippi Railroad.**—The surveys of the St. Charles and Mississippi railroad have been completed. The distance from St. Charles to Rock Island by the line of the survey is 124.1 miles. The cost of grading the main line is estimated at \$283,919 72. The cost of superstructure is put down at \$6,300 00 per mile. The following is Mr. Slack's exhibit of the entire cost of the road: The cost of road bed and superstructure.....\$283,919 72  
Excavation, masonry and bridging 124.1 miles superstructure at \$6,300 per mile ..... 781,830 00

Total.....\$1,065,479 72  
Being an average of \$8,587 82 per mile.

The engineer then adds other expenses as follows:

Turn outs, siding, &c.,.....	\$34,500 00
Drainage and fencing.....	31,400 00
Passenger and freight station, engine house and fixtures.....	30,000 00
Engineering and contingencies.....	58,082 48
Eight engines at \$7,500 each.....	60,000 00
Ten passenger cars at \$2,200.....	22,000 00
Sixty freight cars at \$650.....	39,000 00

Making the cost of road ready for operating.....\$1,340,732 20  
Being an average of \$19,803 64 per mile.

#### Indiana.

**New Albany and Salem Railroad.**—We have received the fourth Annual Report, submitted by the President of this company, James Brooks, Esq., at a meeting of the directors on the 3d ult. Since the last annual report, the stock subscription has been increased \$500,000, making in all \$1,260,000—an average increase of stock for the four years that the books have been opened, of \$25,000 per month. Soon after the organization of the company, the Legislature granted the right to extend the road to any point within the State without limitation, which the company might choose, provided they first made the road to Salem. Under that authority the Board determined to extend the road through Lafayette to Michigan city, and thence west to Chicago, thereby making an eastern connection via Michigan Central railroad, and a connection with the great north-west, through the roads cen-



treing at Chicago, with a branch from the main stem of the road, from Gosport via Mooresville to Indianapolis.

That part of the work between New Albany and Gosport, now under contract, would require, to complete and furnish it with the necessary depots, machinery, &c., \$1,300,000 which after using the stock subscriptions would make it necessary to raise by loan \$500,000, and pledge this part of the work for it. In January last the Board ordered a loan for that amount to be made upon such terms as might be considered most advantageous to the company. After a thorough investigation of the subject, and a careful acquaintance with the market, it was thought most economical to make the bonds bearing a large rate of interest, rather than submit to the discount necessary to procure funds at lower rate. They were accordingly issued bearing ten per cent interest, and one half the amount, \$250,000, which was all the funds required at the time, sold at par. Offers were made for the remaining \$250,000 at the same rates, but were declined. They were offered at par, by taking with them an equal amount of preferred stock, bearing six per cent interest, making the whole equal to eight per cent, or to sell the bonds alone at a premium of ten per cent. The report states that a portion of them have been sold in England on the last named terms. By this arrangement the company secures the necessary amount of funds without incurring any larger debt than the actual amount of cash received and as much less as the premium obtained on the bonds sold above par. Had the bonds been executed bearing a less rate of interest, it would have been necessary to issue a much larger amount to have raised the same amount of money.

The work is now progressing rapidly along the entire line to Gosport; and as soon as the necessary surveys can be made so as to determine the route, books will be opened for the extension of the road from Gosport to Crawfordsville, a distance of about 55 miles.

The negotiations which have been making with the Michigan Central railroad company have terminated in an arrangement satisfactory to all parties. The Michigan Central railroad company in addition to furnishing enough capital to complete that portion of the line between Michigan city and Chicago, take \$500,000 in the New Albany and Salem road, to assist in extending it through to Michigan city—\$400,000 of this subscription to be used between Lafayette and Michigan city, and \$100,000 to be used south of Lafayette. That part of the road between Michigan city and Chicago was immediately put under contract, and will probably be finished within the next six months. The surveys have been completed for the line between Lafayette and Michigan city; and a favorable route can be secured, with light grades, and almost on a straight line the whole distance. This part of the line will be put under contract as soon as possible.

An arrangement has been made with the Crawfordsville and Wabash railroad company to amalgamate the two companies, which will obviate the necessity of making a separate road between Crawfordsville and Lafayette. That road is now nearly completed, and will be finished in three or four months.

The entire distance from New Albany to Michigan city by this road will be about 285 miles, of which 35 miles to Salem was completed and opened for business on the 13th of January last. An additional 21½ miles to Orleans will be opened

about the 1st of September, and nine miles more to the East Fork of White river, four miles south of Bedford, will be ready for the cars by the 1st day of November next. The balance of the line to Gosport will be completed in the course of next year, the means being all furnished for completing it, with the necessary equipments. This will finish and furnish 123 miles.

On the next division, between the last named point and Crawfordsville, 55 miles, books are to be opened during the present month. On the next division, 26 miles, between Crawfordsville and Lafayette the road will be finished and in operation within the next four months.

The president speaks with confidence of being able to complete the whole line in the course of 1855. The road when completed from New Albany to Chicago will be one of the longest roads in the United States under the control of a single company, its length being 320 miles; to which, if we add the Indianapolis branch, 45 miles, we shall have 365 miles of road.

As mentioned above, 35 miles of the road to Salem, was opened for business on the 14th of January. The receipts to the present time are as follows:—

From freights.....	\$10,002 72
From passengers.....	11,199 66

Total .....	\$21,202 38
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The expenditures have been,—

Running expenses, including fuel, oil, wages, repairs of track, machinery, &c.....	\$9,627 05
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	\$11,575 33
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From which deduct for nett earnings previous to January 1st, estimated at. \$2,575 33

Leaving as the nett earnings of the last six months \$9,000 00, which would be at the rate of six per cent. per annum, on the cost of the road and equipments to Salem, say \$300,000.

#### South Carolina.

*Union and Spartanburg Railroad.*—Preliminary surveys having been completed by Wm. Spencer Brown, Esq., Chief Engineer of the Greenville and Columbia railroad company, for the purpose of selecting a route for the Union and Spartanburg railroad, the following is an abstract of the report submitted by that gentleman. Three routes were considered as more or less practicable, the distinguished features of which we will present. The *Newberry route* has easy grades, the total distance from Newberry to Spartanburg being 65 miles and 4,900 feet. The estimate for this route is:—

Cost of masonry, graduation and bridging .....	\$231,222 30
Superstructure and iron and contingencies.....	414,150 00
	\$635,372 30

Both banks of Broad river afford practicable routes of equal length and equivalent grades. Both lines would unite at the mouth of Tiger river.—The estimate upon the route commencing at West abutment of Broad river bridge, and following west bank of Broad river to the mouth of Tiger river, and thence to Spartanburg, is:

Total distance, 68 miles, 1,100 feet.	
Cost of masonry, graduation and bridging .....	\$246,778 40
Superstructure, iron and contingencies.....	426,187 50
	\$672,965 90

The estimate upon the third route, commencing at the Alston Station, and following the east bank

of Broad river to the foot of Henderson island, thence diagonally across this island to the west bank of the river, thence to the mouth of Tiger river, and thence to Unionville, is:

Total distance, 68 miles, 1,100 feet.	
Cost of masonry, graduation and bridging .....	\$306,351 40
Superstructure, iron and contingencies.....	426,187 50
	\$732,538 90

A comparison of the estimates above presented results in favor of the Newberry route, both in distance and cost. But the total distance from Spartanburg to Columbia by this route will be 19 1-4 miles greater than by either of the other routes.

The Broad river routes would be exposed at many points to the freshets of the river, although the chief engineer expresses himself as well satisfied that a road may be located upon it with great safety. The Newberry route would be free from this exposure.

The report concludes by expressing the opinion that either of these routes offers fair inducement for profitable investment, and will be of vast utility to a large, wealthy and productive part of the State, possessing incalculable riches in mineral ores and valuable water power, both of which require this improvement to bring them into profitable use.

#### Maine.

*Androscoggin Railroad.*—A special meeting of the stockholders of the Androscoggin railroad was recently held at Haines' Corner, in East Livermore. The question which called them together was one which involved the completion of the road. After much discussion it was unanimously voted that the directors be authorized to sell the franchise of the road, together with all the privileges and appurtenances and rights thereto belonging, to such parties, corporation, or association as might be willing to take and complete the same to Livermore Falls within two years from date. This was unquestionably the best course for the company, under existing circumstances, to adopt. The company consists of about six hundred stockholders, a large proportion of whom own but one or two shares, and whose loss on these will be more than compensated by the increased value of their property in real estate, and the increased facilities for doing business which the completion of the road will give. The whole amount of stock subscribed amounts to a little over \$50,000, and as the necessity existed of doubling this amount a very considerable majority preferred to give what they had already paid, rather than increase their liabilities. Of the preferred stock proposed at the last stockholders' meeting less than \$10,000 had been subscribed, and this amount principally by the largest stockholders. It now remains for the directors to find parties to complete the road to Livermore Falls, and of their ability to do this there can be no question, and we venture to predict that in three months from this time the wild neigh of the steam horse will join chorus with the roaring cataract at Livermore Falls.

—*Lewiston Journal.*

A very sensible move; the stockholders can well afford to lose what they have paid, for the sake of having a railroad; and they are much wiser in taking the above course than to embarrass themselves by borrowing money to complete the road.

#### Discovery of Silver Ore in Kentucky.

Something like sixty years ago, there was a story rife in Kentucky, of the existence of an extensive silver mine. It was said that a man named Swift had obtained a knowledge of the existence and locality of this mine from the Indians, and that it was carefully concealed until his death, when, as the report says, he left a confession describing the place where the mine was; the location, fabulous or real, was near a great waterfall, and on the

Cumberland or one of its largest tributaries. The story spread far and wide, and many a hunter tried different localities, and came back with bags full of shining metal, which the test of the furnace proved to be principally composed of sulphur.—After repeated disappointments of this kind, the story began to lose its credit, and little was heard about it until the discoveries of gold in California set everybody to think of getting rich by mining. Men skilled in mineralogy have recently visited the places described by the old tradition,—and at a locality near the falls of the Cumberland, in Whitby county, Kentucky, silver ore is found in promising abundance, yielding ten grains of silver to an ounce of ore, or an ounce of silver to fort-eight ounces of ore. If one hundred pounds of ore will produce two pounds of silver, or thirty-two dollars, the ore may be considered of fair quality. A large smelting furnace is being erected, and preparations are in progress for an extensive working of the mine.

## American Railroad Journal.

Saturday, August 16, 1851.

### Quebec and Richmond Railway.

The survey of the line of the Quebec and Richmond railway, from the city of Quebec to a point of intersection with the Portland and Montreal railway at Melbourne, has been finished, and the Engineers are now preparing their report. We see by the Quebec papers that Mr. R. T. Bailey, the engineer of the field service, and Mr. Morton left for Portland last week. We presume Mr. Morton will soon bring out his report of the survey.

We understand that the distance between Quebec and Montreal by the proposed line, and the Portland railway, will be 174 miles only, or less than the sailing distance by the St. Lawrence river.

Quebec to Melbourne.....	101 miles.
Melbourne to Montreal.....	73 "
	174 "

The road from Montreal to Melbourne is nearly finished, and is to be opened the present summer or fall.

### Ohio.

**Bellefontaine and Indiana Railroad.**—We learn that a successful effort has been made by the Bellefontaine and Indiana company, through which the amount of their stock subscriptions has been largely increased during this summer. The total amount of stock subscriptions is now \$840,000, and it requires but \$480,000 to grade and bridge the entire line from Galion to the Indiana State line—118 miles.

A contract has been made with Messrs. J. & S. Chamberlain, experienced and well known railroad contractors, to furnish the cross-ties, and lay, and gravel the entire track; and if the iron arrives as anticipated, to complete the 20½ miles from Galion to Marion this fall. The whole road is to be finished in October, 1852. Mr. Godman, president of the company, has purchased 2,000 tons of rails, to be delivered at New York at the earliest period practicable, to lay down the portion named.

The grading, &c., on the residue of the line is going forward steadily. The superstructure of all the principal bridges was let some time ago to Messrs. Thatcher, Burt & Co., well known builders.

Contracts have been made for the depot buildings, locomotives, passenger cars, freight cars, gra-

vel cars, &c., and the prospects of the company are cheering in every respect.

### Railway Gauge of Canada.

The gauge of 5 feet 6 inches has been adopted for the trunk line of Canada, on the north shore of the St. Lawrence, by the railway committee. The passage of the bill through the Parliament is regarded as certain.

### Maine.

**Atlantic and St. Lawrence Railroad.**—The following gentlemen have been chosen directors of this road for the present year:—Josiah S. Little, Eliphalet Greely, St. John Smith, John B. Brown, A. W. H. Clapp, Thomas Hammond, Wm. P. Fessenden, James L. Farmer, Ezra F. Beal, Wm. W. Thomas, Samuel Jordan, Solomon H. Chandler and Thomas Crocker.

### Ohio.

**Cincinnati, Wilmington and Zanesville railroad.**—This road is in a fair way to be built. Sufficient stock is already subscribed to grade and bridge it. The engineer will put it under contract immediately. It runs through Muskingum, Perry, Fairfield, Pickaway, Clinton, Warren, &c., to Cincinnati. These counties are out of debt and very rich in resources.

Clinton county subscribed \$200,000, Fairfield, \$250,000, Pickaway \$200,000 and the other counties will soon do the same. The private subscriptions were large, making the whole amount about \$1,250,000.

The President of this road is Franklin Corwin, Esq., of Wilmington; Chief Engineer, Mr. McCracken.

### Iron Railroad Car.

It is stated that some ingenious mechanic of New York has invented a railroad car made of wrought iron, said to be at least one fourth lighter than the ordinary modern carriage used upon railways—and capable, moreover, of resisting without being crushed, a shock of ten times its own weight. The latter advantage, if it can be substantiated, must constitute a most important recommendation to the adoption of these cars upon our railroads.

THE BOSTON IRON TUBE COMPANY was organized a few days since by the election of J. J. Walworth, Pliny Cutler, Aaron Baldwin, Gardiner G. Hubbard, Joseph Nason, Edward Crehore, and J. H. Blake, as directors; J. J. Walworth, President, and A. Charles Baldwin, Treasurer. The capital of two hundred thousand dollars has been paid in, and the works of Walworth & Nason, at Edgeworth and Boston, purchased by the new company.

### Stock and Money Market.

The stock and money market presents the same features indicated at our last report. The downward tendency of securities is still unchecked. There is no sale for bonds of new works, and our friends will do well to keep out of the market till a change takes place, however great their necessities. Money commands high rates upon the best of paper. A feeling of uncertainty hangs over the market, and nothing can be predicated with any certainty of the future. The great cause of the distress is owing to our foreign indebtedness. The balance of trade is against us, which we have to pay in specie.

The foreign rail market continues dull. Our roads are all doing a remarkably fine business, indicating great activity in most of our departments of industry.

The following are the earnings of the Ogdensburg railroad in July, 1851:

Freight, through, going east.....	\$8,974 68
" " " west.....	1,477 24
" way " east.....	6,859 25
" " " west.....	1,194 93
Company's property in freight train.....	786 50
	\$19,292 60
Passengers.....	9,659 50
Mail.....	425 00
Express.....	50 00
Storage.....	20 84
Rents collected.....	4 00

Total.....\$29,451 94

The income of the Cincinnati, Columbus and Cleveland railroad company, for the months of June and July, was as annexed:

	June.	July.	Total.
Receipts from passengers.....	\$30,229	\$35,827	\$66,056
" freight.....	14 092	13 523	27 615
Mail, etc.....	2,000	2,250	4,250

Totals.....\$46,321 \$51,600 \$97,921

Number of passengers.... 13,743 16,409 29,152

The earnings of the Rutland and Burlington railroad were in—

July, 1851.....	\$31,652 68
July, 1850.....	15,521 64

Increase—104 per cent..... 16,131 04

The July earnings of the Mississippi and Milwaukee railroad were \$2,692 67.

The coinage of the mints up to 30th June, has been as annexed:

Mint at Philadelphia.....	\$24,269 509
" New Orleans.....	6,551 500
" Charlotte.....	170,999
" Dahlonega.....	105,592

Add for the month of July—partly estimated..... 3,902,700

\$35,000,000

The exports in the same period have been but \$25,000,000, showing that we have increased our specie ten millions during that time, not taking into account the amount which comes into the country in the pockets of emigrants.

**Erie Canal.**—The amount received for tolls on all the New York State canals during the 1st week in August, is..... \$88,028 34

Same period in 1850..... 84,526 43

Increase in 1851..... \$3,501 91

The aggregate amount received for tolls from the commencement of navigation to the 7th of August, inclusive, is.....\$1,608,405 11

Same period in 1850..... 1,324,876 11

Increase in 1851.....\$283,529 00

The Evening Journal gives the annexed statement of the quantity of flour, wheat, corn and barley, left at tide water during the 1st week in August in the years 1850 and 1851, as follows:

	Flour.	Wheat.	Corn.	Barley.
	bbls.	bush.	bush.	bush.
1850.....	65,251	40,052	155,628	1,665
1851.....	82,438	99,975	246,015	2,100
Increase.....	17,187	59,923	90,387	435

The aggregate quantity of the same articles left at tide water from the commencement of navigation to the 7th August, inclusive, during the years 1850 and 1851, is as follows:

	Flour.	Wheat.	Corn.	Barley.
	bbls.	bush.	bush.	bush.
1850.....	924,925	398,489	2,027,845	131,577
1851.....	1,571,826	1,018,115	4,493,696	114,385
Inc.....	646,901	619,626	2,465,851	dec.17,192



The aggregate quantity of the same articles left at tide water from the commencement of navigation to the 7th August, inclusive, during the years 1849 and 1851, is as follows:

	Flour. bbls.	Wheat. bush.	Corn. bush.	Barley. bush.
1849.....	1,167,689	732,666	3,394,045	99,880
1851.....	1,511,826	1,081,115	4,493,696	114,385

Increase. 404,137 348,449 1,099,651 14,505  
By reducing the wheat to flour, the quantity of the latter left at tide water this year, compared with the corresponding period of last year, shows an increase of 770,826 bbls. of flour.

The condition of the New York State Banks, per the March and June Reports of the Superintendent of the Banking Department of the State, is exhibited in the following tables, which we copy from the Albany Evening Journal. The March report embraces returns from 212 banks, and one branch, and the June report 221 banks and one branch—an increase of nine since March:

RESOURCES.			
	March 29.	June 21.	
Loans and discounts, except to directors and brokers.....	\$101,203,401	\$106,584,891	
Loans and discounts to directors.....	5,082,030	5,374,664	
*All other liabilities, absolute or contingent, to directors.....	1,645,722	1,301,614	
All sums due from brokers.....	3,876,118	3,643,641	
Real estate.....	3,439,450	3,761,385	
Bonds and mortgages.....	3,818,991	3,969,343	
Stocks.....	14,342,689	15,049,031	
Promissory notes, other than for loans and discounts.....	193,683	151,835	
Loss and expense account.....	567,983	578,764	
+Overdrafts.....	251,359	279,981	
Specie.....	9,096,274	8,975,258	
Cash items.....	11,336,297	13,515,751	
Bills of solvent banks on hand.....	2,682,847	2,827,993	
+Bills of suspended banks on hand.....	5,262	5,041	
Estimated value of same.....	2,103	1,942	
Due from solvent banks on demand.....	12,049,144	9,702,748	
Due from solvent banks on credit.....	853,270	171,068	
+Due from suspended b'ks on demand.....	56,703	120,905	
+Estimated value of same.....	14,053	7,139	
Add for cents.....	640	684	
Total resources.....	\$168,827,490	\$174,616,704	

\* The whole of this item, and a portion of those marked †, form no part of the aggregate.

LIABILITIES.			
	March 29.	June 21.	
Capital.....	\$51,022,829	\$55,464,031	
Profits.....	8,727,893	9,223,933	
Notes in circulation not registered.....	564,052	562,244	
Registered notes in circulation.....	27,927,483	26,959,552	
Due Treasurer of State of New York.....	915,744	1,225,127	
Due depositors on demand.....	50,227,188	54,458,105	
Due individuals and corporations other than b'ks and depositors.....	2,694,578	1,183,916	
Due to banks on demand.....	24,725,084	23,557,925	
Due banks on credit.....	590,180	299,962	
Due to others not included in either of the above heads.....	1,430,601	1,688,385	
Add for cents.....	328	341	
Total liabilities.....	\$168,825,893	\$174,573,521	

These tables show a further increase of \$4,442,202 in the banking capital of the State. The amt is now larger than at any previous date within a year, and is chiefly made up by the Metropolitan

and two or three institutions in this city which have gone into operation.

There has been an increase in loans and discounts amounting to \$5,674,124, and a decrease of \$979,739 in circulation. The returns show that only a small amount of specie (\$221,016) has been disgorged from the vaults. The increase of stocks amounts to \$706,342; in cash items, \$2,179,454; bank notes, \$145,146, and in deposits, \$4,231,917.

In the March report there is a discrepancy between the total resources and total liabilities. This occurs from balances not being forced. No report was received from one associated and three individual banks in time for the June report. The figures for these banks are taken from the books of the department. For this reason, and because the reports from several banks do not balance, there is a discrepancy in the footings of the June statement.

	Dec. 21, '50.	Mar. 29, '51.	June 21.
Loans & disc.....	\$104,294,082	106,285,431	111,959,555
Stocks.....	14,035,547	14,342,689	15,049,031
Specie.....	11,937,798	9,096,274	8,975,258
Cash items.....	11,345,041	11,336,297	13,515,751
Bank notes.....	2,849,973	2,682,847	2,827,993
Due fm banks.....	13,407,038	12,902,414	9,873,816
Capital.....	49,866,820	51,022,829	55,464,031
Circulation.....	27,926,263	28,491,535	27,521,796
Deposits.....	53,092,447	50,227,188	54,458,105
Due to banks.....	25,005,188	25,315,264	23,857,887

### Railway Share & Stock List;

CORRECTED WEEKLY FOR THE  
AMERICAN RAILROAD JOURNAL.

NEW YORK AUGUST 16, 1851.

### GOVERNMENT AND STATE SECURITIES.

U. S. 5's, 1853.....	100½
U. S. 6's, 1856.....	105½
U. S. 6's, 1862.....	111
U. S. 6's, 1862—coupon.....	113a114
U. S. 6's, 1867.....	114½
U. S. 6's, 1868.....	116½
U. S. 6's, 1868—coupon.....	121½
Land Warrants.....	140a145
Arkansas 6's.....	52a53
Alabama 5's.....	91a92
Indiana 5's.....	82a83
Illinois 6's, 1870.....	65a68
Kentucky 6's, 1871.....	109a110
Massachusetts sterling 5's.....	105a106
Massachusetts 5's, 1859.....	100½
Maine 6's, 1855.....	103
Maryland 6's.....	102½
Michigan.....	—
Mississippi.....	—
New York 6's, 1865.....	117a118
Ohio 6's, 1860.....	108
Pennsylvania 5's.....	89

### RAILROAD BONDS.

Atlantic and St. Lawrence, 6 per cent.....	85
Baltimore and Ohio, 1857.....	94½
Boston and Providence 6's, 1855.....	101
Boston and Worcester 6's, 1855, convertible.....	107½
Bost., Concord and Mont. 6's, 1860, mortgage.....	87½
Cheshire 6's, 1860.....	91½
Connecticut River 6's, convertible.....	98
Erie 7's, 1859.....	100
Erie 7's, 1868.....	107
Erie income 7's.....	91
Hudson River 7's, 1853.....	101½
Michigan Central, convertible, 8's, 1856.....	104½
New York and New Haven.....	100½
Norwich and Worcester, mortgage, 1860.....	80a85
Old Colony, 1854.....	97½
Ogdensburg 7's, 1859.....	96
Portsmouth and Concord.....	80a85
Passumpsic 6's, 1859.....	94½
Rutland 7's, 1863.....	97
Reading mortgage, 1860.....	80
" " 1870.....	75
Sullivan, mortgage 6's, 1855.....	80
Vermont Central 6's, 1852.....	96½
" " 6's, 1856.....	91½
Vermont and Massachusetts 6's, 1855.....	86½

### RAILROAD STOCKS.

[CORRECTED FOR WEDNESDAY OF EACH WEEK.]

	Aug. 6.	Aug. 13.
Albany and Schenectady.....	96½	—
Atlantic and St. Lawrence.....	60a65	—
Androscoggin and Kennebec.....	30a35	—
Boston and Maine.....	103	103
Boston and Lowell.....	110½	109
Boston and Worcester.....	100½	101½
Boston and Providence.....	48	85½
Bost., Concord and Montreal.....	40	—
Baltimore and Ohio.....	70	—
Baltimore and Susquehanna.....	40	—
Cheshire.....	54½	—
Cleveland and Columbus.....	—	—
Columbus and Xenia.....	—	—
Camden and Amboy.....	—	—
Connecticut River.....	68a70	—
Delaware and Hudson (canal).....	113	—
Eastern.....	93½	96
Erie.....	72½	69
Fall River.....	95	91½
Fitchburgh.....	108½	109½
Georgia.....	—	—
Georgia Central.....	—	—
Harlem.....	67	68½
Hartford and New Haven.....	124	—
Housatonic (preferred).....	52	—
Hudson River.....	75	—
Kennebec and Portland.....	50a55	—
Little Miami.....	—	—
Long Island.....	16½	14½
Mad River.....	—	—
Madison and Indianapolis.....	96	—
Michigan Central.....	104	103½
Montgomery and West Point.....	—	—
Michigan Southern.....	—	—
Manchester and Lawrence.....	95½	89
Morris (canal).....	15½	15½
New York and New Haven.....	113	—
New Jersey.....	133	—
Northern.....	66	66½
Nashua and Lowell.....	107½	—
New Bedford and Taunton.....	111	—
Norwich and Worcester.....	53½	48
Norfolk County.....	18a20	—
Ogdensburg.....	35½	31½
Old Colony.....	65	66
Passumpsic.....	80	—
Pennsylvania.....	—	—
Pittsfield and North Adams.....	95	—
Philadelphia, Wilm'gton & Balt.....	29½	29
Petersburg.....	—	—
Richmond and Fredericksburg.....	—	—
Richmond and Petersburg.....	—	—
Reading.....	51	51
Rochester and Syracuse.....	105½	106
Rutland.....	53	47
Stonington.....	42	41
South Carolina.....	—	—
Syracuse and Utica.....	130	—
Sullivan.....	30	—
Taunton Branch.....	110	—
Troy and Greenbush.....	90	—
Tonawanda.....	—	—
Utica and Schenectady.....	130	—
Vermont and Canada.....	103	—
Vermont Central.....	30½	30
Vermont and Massachusetts.....	26½	25½
Virginia Central.....	—	—
Western.....	102½	103
Wilmington and Raleigh.....	—	—
York and Cumberland (Pa.).....	21	—

### Baltimore and Ohio Railroad.

The Wheeling Gazette thus refers to the progress of the work on the western division of this great work:—"The work on the big tunnel of 2400 feet under Mr. Pettibone is progressing rapidly and with a characteristic system and foresight. Mr. P. has gone into the tunnel with a 90 foot cutting, and has already sunk one shaft to the depth of 160 feet.—This is an immense work, and must take him until the fall of 1852 to complete it, at which time all the sections on the line west of that will be finished. It is enough that the Baltimore and Ohio railroad is progressing fast as possible to this city, and in seventeen months will be open for travel."

## Commerce of Philadelphia.

Few of our readers out of the state of Pennsylvania are aware of the efforts making by Philadelphia to constitute herself the commercial emporium of the United States, or of the full conviction which her citizens possess, of their ability to effect this object by the completion of the work now in progress, and connecting her with the western states. Our neighbors confidently anticipate that the great Pennsylvania railroad, with its connections, will turn the channel of trade to themselves, which now flows to New York. This idea is founded upon the fact that Philadelphia is nearer to the western states by railroad, than New York; that these works can successfully compete with our canals; and that trade and commerce always takes the shortest and cheapest route. Assuming these positions to be correct, the result would appear inevitable that Philadelphia will draw off a large portion of the trade now possessed by New York.

If the above premises are admitted, the result claimed by no means follows as a matter of necessity. New York may possess other advantages, more than compensatory for her inferiority of position in reference to distance. But we will waive this altogether, and take for granted that both are equally situated for foreign trade. Let us examine their relative position in reference to that of the west.

Individually, we believe we have the same partiality for Philadelphia as for New York. We are equally anxious to see her succeed in her projects. If she can, in the new race that is commencing, bear off the palm from New York, we bid her God speed. The whole country are interested in the opening of the *cheapest* channels of inter-communication—insignificant portions only in costly ones. If we come to the conclusion that the position assumed by our neighbor is an untenable one, it must be attributed to no ill will towards her, or favoritism towards New York. We shall only draw conclusions from well admitted facts. And it is just as important for Philadelphia, that she should know what her works will fail to accomplish, as to know what they will effect. It would be the height of folly to proceed to the construction of costly works, by way of preparation for a business that can never be realized. Pennsylvania has a pregnant example of this in her own history.

The Philadelphians reason in this way. They say it is 175 miles nearer from Cleveland to their city, and 249 miles nearer from Columbus, Ohio, than to New York; that these distances are the measure of their superiority of the former, that distance and cost of transportation are equivalent terms; consequently when the roads connecting her with these parts are completed, she will take their trade from New York, by virtue of offering the cheapest route.

Let us look at this question of transportation. From Philadelphia to Cleveland, by way of Pittsburgh, the only route that can be opened for years, the distance is not far from 500 miles, nearly 200 less than to New York by way of the Erie canal. To take the trade of that city, she must of course offer the cheapest, (and we include in that term, time as well as cost,) route. How much will it cost them to send forward goods between these parts?

The absolute cost of forwarding by railroad has in no case been ascertained with entire certainty. It of course varies with the characteristics of each road. In coming to a correct estimate, we must rely upon the experience of roads already in operation. We find from an examination of the returns of the New York railroads, for the year 1850, that

the average cost of moving one ton of freight per mile was \$2.91. That the average charge was \$5 13 per ton per mile. The cost of transportation on the Massachusetts roads for 1850, by similar returns, was \$2.43 per mile per ton, and the charge \$2.75. The higher rate charged on the New York roads was on account of the canal tolls upon the roads that constitute our Central line. Taking \$2.50 as the average cost per ton per mile, and one dollar for profit on capital of railroads in the United States, and this is under the present mark. It would cost \$17 50 per ton for the distance from Cleveland to Philadelphia, against \$4.50 the present rate of charge between Cleveland and New York. Upon the enlargement of the canal this charge will be reduced to \$3.50, if not to \$3 per ton. Iron can now be forwarded from New York to Cincinnati for \$7 per ton, which is much less than the cost of transportation by railroad from Philadelphia to Pittsburgh.

Now how can we get around this very strikingly apparent result in favor of New York? We see no way in which it can be done. It may be said that the cost of transportation by railroad will be greatly reduced. Admitting that it can be, to the low figure charged by the Reading road, which is about two cents per ton per mile (on a road where all the grades are in favor of the traffic and the business offering fully up to its capacity,) and even this estimate leaves the advantage entirely on the side of New York. If these things are as we have stated, and we wish to be corrected if they are not, can the Pennsylvania Central railroad change the current of Western trade from New York to Philadelphia? We should like to see the friends of that great work discuss this matter upon its merits, instead of claiming a result that remains to be proved. The subject is one of very general interest, and it is certainly of great importance that the relative merits of the two rival routes, the railroad and the canal, should be ascertained.

We think that Mr. Tyson, an extract of a letter from whom, addressed to the British Consul at Philadelphia, we give below, is entirely mistaken as to the cause of the loss, by that city, of her foreign trade. Why has Virginia lost her foreign commerce? Surely not for lack of means. The Virginians are not a maritime people—neither are the Pennsylvanians. Why do not the New Englanders mine coal and iron? Because they have none in their soil. In the same way, the people of the Southern states, and to a certain extent, of Pennsylvania, lack the element necessary to success in maritime pursuits. They cannot compete with those who have this element to a greater extent. Consequently they have withdrawn from the contest, and turned their attention to other pursuits. The change which has taken place, and to which Mr. Tyson refers, is not accidental. It is the natural expression of different characteristics and capacities. The people of Maine build three-fourths of our large ships, and they go to Virginia and Florida for the timber for them. They can import their timber and build their ships in Maine, cheaper than upon the soil where the timber grows.

Mr. Tyson complains of the New York and Erie gauge. He says it was dictated by a purely selfish policy—that it was the only exception to the uniform gauge throughout the United States. He certainly is very poorly informed upon these matters. The Ohio roads have a different gauge from Pennsylvania. The four feet eight and a half inch gauge extends only to Pittsburgh. There are a great variety of gauges in the different States.

Mr. Tyson urges that the New York and Erie road shall not be allowed to push its way through the north part of Pennsylvania. We are sorry to

see such a spirit. If his positions are correct there can be no danger from this. It certainly indicates a want of confidence in them. But we will let him speak for himself. He says:—

• Pennsylvania possesses in her site, one element of intrinsic superiority over all her sisters. She is the only state in the union which has a navigable outlet to the Atlantic, a footing on the lakes, and a position on the western waters. Her controlling sceptre is admitted over the long line of the Ohio, by standing at its head, at Pittsburgh. But before I trace the advantages of this position in furnishing so many inlets to the reservoir of her external trade, as so many tributaries to the expansive sea of her foreign commerce, permit me to take a rapid view of what her own territory supplies.

The whole number of railways within the state of Pennsylvania, which exceed a mile in length, is 42, embracing together an aggregate extent of 1132 miles. Authentic data are before me, laboriously compiled by Col. Childs, which show that the cost of constructing much the greater portion of these 1132 miles of railway, amounts to the sum of \$48,236,431. If to this sum be added the cost of those which are not officially ascertained, and of those prolonged beyond our limits, but made with Pennsylvania capital, the estimate, upon reasonable presumptions, would swell the whole expenditure to above sixty millions of dollars. The length of the canals made within the borders of Pennsylvania, is about 1,000 miles, the construction of which may be estimated to have cost nearly thirty millions of dollars. The immense sums which have been employed in making tunnels and adits to coal, and subterranean and superficial structures, for mining; and in the disinterment of iron ore, and works connected with its manufacture; would more than double the expenditure for railways and canals.

No city in the Union has been so proluse as Philadelphia in the application of its capital, to develop the material wealth of the state in which she is situated; nor can any other state of the confederacy, exhibit such extensive lines of artificial conveyance.

As Pennsylvania is in the van among her sisters, in resources and improvements, so well be the destiny of her metropolis, in magnitude and trade. SHE, and not New York, is the GREAT DISTRIBUTOR AND SELLER OF MERCHANDISE to a large portion of the western and southern country. Not content with various railway connexions with many, the chief points of trade in her own state, she will soon hold in her iron embrace the cities of Columbus, Cincinnati, and St. Louis, by way of Pittsburgh, the great western emporium of Pennsylvania. To these granaries, the various avenues of western trade converge. At no distant day she will place her cars, by way of her own great entrepot, at Cleveland, in Ohio, and at the town of Erie, in her own state, on the lake. These connexions will secure a large portion of the trade of that grand highway of waters. At Wheeling, in the state of Virginia, she will participate with Baltimore in the southern trade. These points of junction give to Philadelphia the trade of that immense region west, north and south, whose luxuriant opulence would build into greatness, and sustain the propriety of many cities. Locally situated between New York and the fertile districts beyond, their trade is naturally hers, and she now is stretching out her iron arms to receive what nature so bountifully offers.

New York having no geographical connexion with the west, is limited by her natural boundary to the Lake trade, and encounters in her ambitious endeavours to clutch our western commerce, the enterprising barrier of the county of Erie, in Pennsylvania. If the existing legislation of the state is to be respected, and future legislatures prove faithful to their duty, the Gate of the West will never be opened to such an avenue as the New York and Erie railroad. The thoroughfare is constructed upon the very narrow principle of the wide gage, for the exclusive benefit of the city of New York, and to prevent any beneficial union with the works of Pennsylvania, the width of whose railways requires different engines and cars. Confining her to Dunkirk, until Philadelphia shall have reached the port of Erie, with a railway which she is resolved to construct, the western roads of the gage common to the whole country, will converge at the same



terminus, and their cars, without the necessity of trans-shipment, will pass directly to Philadelphia; leaving to New York only that portion of trade which is specially destined for a northern mart. Such an arrangement secures to Philadelphia the commerce concentrated at Erie, as she has already secured that of the upper lakes at Cleveland. By her connexions with Cincinnati and Wheeling, she will appropriate much of that southern custom which is intended to enrich the metropolis of Maryland.

It is by means of the Pennsylvania railway to Pittsburg, prolonged westwardly to St. Louis, joining Cleveland on one side, and Wheeling and Cincinnati on the other, and stretching through Kentucky to Nashville and ulterior points, that Philadelphia will enjoy the immense trade of the upper lakes of the Ohio, of the upper Mississippi, and of their numerous, beautiful and teeming tributaries. The improvements of New York cannot offer a competition with Philadelphia, for the trade of that expansive region of which these cities and towns form the natural drains or the grand foci. Cleveland is 175 miles, and Cincinnati 249 miles nearer to Philadelphia than New York; and the remoter points of junction beyond, maintain these relative distances. The completion of the railway, now nearly finished, which is to connect these rich and wide domains to Philadelphia, will form a marked era in her history. It will be the epoch not merely of the commencement of an intimate intercourse with the west and its dependencies, but the time when our enterprises are to spring into life. No untoward accident has ever marred the prospects of the Pennsylvania railroad which has been blessed in an excellent engineer, by whom it has been capitally located on the shortest line which nature permits, with light gradients, and built in the best manner, and at the least possible expense. This undertaking has been well sustained by popular appreciation, and by the liberality of public and private assistance. It will literally redeem the pledge of its original friends, that no debt should be incurred in its prosecution, and that the great work should be carried on and finished, by means alone of subscriptions to its capital stock. This policy which was declared to be fundamental, has been faithfully observed, and the capital of the company now nearly if not fully subscribed, must prove, so unlike all previous efforts in Pennsylvania, a *paying stock*, greatly beyond the legal interest of money, and of consequence, universally in demand.

The successful completion of this enterprise will create a motive or incitement to the construction of a great railway, which shall connect Sunbury with Erie. Such a work will control the destinies of that mighty commerce, with which Philadelphia will be enriched by the intermediate country and the north-west, concentrated at the lake, its northern terminus. Those disjointed links, which the continuity of the chain requires between the western side of the Susquehanna at Harrisburg and Sunbury, will be speedily undertaken so as to form an unbroken connexion with that interesting and fruitful region. No doubt can be entertained that Philadelphia will shake off all apathy and unconcern, and rouse herself to the magnitude of a present and impending danger. The cars of the New York and Erie railway, are now in the vicinity of the town of Erie in Pennsylvania, and menace Philadelphia with the abstraction of her trade in her own state, and at one of the most copious sources of its supply. The selfish and exclusive policy which suggested the six foot *gage* in opposition to (four foot eight inches) the universal *gage* of the country, will, in the presence of a rival produce the natural effect of illiberality, in cutting off a profitable union between that railway and the western roads. It indeed prevents the single evil which this short sighted policy proposed alone to redress,—the diversion of merchantize, once in its cars, from their destination in the city of New York. By forming a barrier, as it does, to the flow of all tributaries to its own stream, the invidious design will be thwarted or counteracted by turning these currents into the swelling channel of its rival leading to Philadelphia. But the relative distances from Erie to Philadelphia and New York, must determine the direction of the trade, whenever and as soon as the opportunity of a transit thither shall be presented.

With such means of intercourse, such of trade and travel to and with the west, north and south, no value can be set, no calculation made of their advantages, which would not be deemed vain or extravagant. The various treasures of the state will seek a market in her own metropolis, and the untold wealth of the fruitful regions beyond, surpassing in extent and fertility half the area of cultivated Europe, will be poured at her feet. With these aids and the facilities presented by her noble river, the commerce of Philadelphia requires but the sustaining hand of an earnest home-bred pride, it solicits but attention to the dictates of imperious duty, to be all that her local wants demand, all that honest ambition may covet, all that reasonable hope can justify.

The exports of Philadelphia which were less than eight millions of dollars in 1790, rose in 1796 to the sum of \$17,523,866. Chiefly with Philadelphia capital, Pennsylvania made the first turnpike road, excavated the first canal, and constructed the first railway of any magnitude in this country. The importance of internal improvements employed the tongues and pens of her best speakers and writers, at an early day. These sentiments concurring with the influence of her example and the experience of its effects, diffused a similar spirit through New York and New England. You will not accuse me of indulging in a boastful or vain-glorious spirit, in relating what history records. It is simply the truth, that Philadelphia, in all the duties of a large community,—in the construction of hydraulic works, for the introduction of pure water from without her municipal limits—in sanitary measures,—in a complete system of subterranean drainage—worthy of imperial Rome for solidity of structure—was equally in advance of her sister cities. Her progress required and sustained these improvements. The rich trade of the west seemed destined by nature, aided by the facilities of improved roads, to centre in Philadelphia. As the metropolis of the colonies, she became the capital of the United States, under the laws of the Federal union. Her China trade was large, and secured golden returns. The vessels of her merchants unfolded their canvass in almost every sea. Colossal fortunes were amassed by an expanded, intelligent and successful commerce. Under the genial influences of kindly wealth, heaven-blest charities were founded, and conveniences, arts and elegancies were multiplied. It forms a portion of the letter I inflict on you, to recount the means by which these advantages were lost, and how they can be restored, with those accretions which time has accumulated.

While thus prosperous, and her commercial progress eminently onward, Philadelphia became informed of the rich mineral wealth of the interior. The vast deposits of coal and iron were so alluring in their promises, that the public mind seized upon them with avidity. The first difficulty was to subdue those wild and magnificent fortresses of nature—those inaccessible walls of rock and mountain with which she delighted to guard her treasures. To penetrate their recesses, to scale their conglomerate ramparts, and convey the hidden mineral to market, over a country whose undulations of surface seemed to laugh at the effort, was ridiculed as the dream of fanaticism or the dictate of folly. But impediments seemed only to stimulate activity, to quicken the spirit of speculation, to open the purse of enterprise. Much of the capital which had been employed successfully in foreign commerce, was thus diverted from its accustomed channel, and taught to wander to the hills, the ravines and the rivers of the Lehigh, the Schuylkill and the Susquehanna.

Many millions of dollars were buried in the recesses of these mountains, or in attempts to wind round their valleys, or improve the navigation of their streams. Perhaps a hundred millions—and I do not lightly hazard this estimate—does not exceed the sum which was transferred from the concerns of mercantile activity, and absorbed in unproductive investments, made to develop the trade, the agriculture, and above all the mineral wealth of the interior. But prodigies were achieved in various parts of the state. The Schuylkill and Susquehanna rivers were first united by a canal, and both afterwards connected by the same kind of highway with Philadelphia. That vast arm of the Atlantic, the Chesapeake Bay, was joined by canal to the

Delaware, whose noble waters find a ready outlet to the sea. One of the great coal fields of the state was brought to the gates of Philadelphia by a fine canal and a noble railway, and innumerable other works of present expense and future utility were undertaken and completed. Fifty miles at least of under-ground railroad, are said to exist in Schuylkill county alone. The locks of the Lehigh canal are the deepest and finest in the world; and nothing can exceed in solidity and beauty, the inclined planes, and other artificial works of that opulent region. Of the coal mines and iron mines, of the canals and railways of the state, which were undertaken in that day of blind and wanton expenditure, how few have realised the dreams or the hopes of their ardent projectors. The geology of the state had not been explored, the art of mining was imperfectly understood, and the science of engineering, so cycled, was marked only by improvidence, by fraud, and by blunders. These gigantic efforts, like all premature and undigested schemes, were fruitful only of sad results to the undertakers. The coal trade was to be nurtured and matured by slow degrees; it is yet in its infancy, and only now beginning to reward its owners. The iron manufacture, which was called into existence by the *protective* system, must, in order to flourish, be sustained by the stability of genial legislation. Exposed to the caprices of fluctuating sentiment, and the evils of a step-dame policy, it continues to cripple or ruin the manufacturer.

While the commercial capital was thus wasting away, and the commercial spirit absorbed by momentous projects at a distance, the Erie canal was verging to completion. It was intended to conduct, by the way of the lakes to New York, that western trade which had been the exclusive property of Philadelphia. The object was fully attained. By this artificial highway, our natural heritage, the trade of the west, was transferred to a sagacious and vigilant rival. For a time, our shrewdest citizens were too much amused and delighted by their mountain treasures in the interior, to perceive the decline of their foreign commerce, and the adverse turn of the commercial tide in their domestic trade. The state, animated by a proper spirit towards her metropolis, determined not to submit, an unresisting victim, to an inversion of the natural laws of trade. She planned a grand scheme of internal improvements, which proposed, among its primary objects, the irrevocable appreciation to herself of the western produce and markets, and a part of the commerce of the lakes. This theory, if prosecuted with the intelligence and forecast which gave it birth, would have neutralized the effects of the Erie canal, and prevented the fame of Clinton, by undermining or removing the base of its monument. But owing to the irretrievable mistakes in the construction of the great highway, which was made to Pittsburg, the western trade refused the conveyance—a conveyance which was, in truth, of such a nature as to confirm it inalienably to New York.

The chain which was to bind the east with the west, was not continuous and unbroken; composed of intermingled and welded links; but severed, disjointed, fragmentary. It was an amphibious connection of land and water, consisting of two railways separated by canal, and of two canals separated by railway, happily elucidating the defects peculiar to both modes of transit, with the advantages of neither. This improvement, being useless as a competitor of the Erie canal, and other projects being unfinished, the public works disappointed private hope in the benefits they promised, and public hope in the unprofitable burden they imposed. The Commonwealth oppressed by her debt, and the citizens impoverished by their losses, the western trade alienated and the foreign trade neglected and diminishing, Pennsylvania presented the reverse side of her early picture—one not pleasing to contemplate, but, I presume, less painful and humiliating in the remembrance and retrospect, than the experience and reality.

These misfortunes were accompanied or quickly followed by others. Severe losses in the China trade ruined some of our largest ship-owners, and unwisely led to the total abandonment, at our port, of this lucrative branch of commerce. In the gloom which pervaded the commercial ranks of society, some of the most astute and enterprising merchants removed to New York, and aided by their capital

and intelligence to build up that prosperity to which the acquisition of the western trade, and the foreign commerce of Philadelphia, had largely contributed. Other melancholy events succeeded. The bank of the United States, though situated in the city, did not render such accommodations to the business community here, as were favorable to the growth of the foreign, or the enlargement of the coasting trade. Still paper money was so abundant as to foster remote enterprises, and lead to many visionary and extravagant schemes. The bankruptcy of that great institution, so long the cherished object of our pride and confidence, was as sudden as the descent of an avalanche. Other financial disasters followed, in quick succession. These failures suddenly contracted, within the narrowest limits, a currency of unusual expansion, and threatened to involve our people in a general insolvency. Prices which had been unnaturally inflated, became so depressed as to be nearly nominal. All exchange of commodities was at an end, negotiations of sale and purchase stopped, and the payment of debts ceased. The banking capital of the city was reduced by the simple process of annihilation, from fifty-one millions to eleven millions of dollars! Where ruddy health, perhaps unnatural plethora, had appeared, all were paleness and dejection, wan extenuation and prostrate syncope. If a volcano had opened its fiery jaws in our midst, or an earthquake had shaken the firmest edifices to their foundations, the popular terror could not have been more painful or pervading. The multitudes over the state who had entered into engagements in a moment of universal confidence and upon the faith of fair but deceptive appearances, as they were unable to pay, were quickly required to make liquidation.

For the American Railroad Journal.  
**Mohawk Valley Railroad.**

The report of the Directors and myself, on the proposed road has been before the public since the 15th day of May last; and, so far as my knowledge extends, not one word has appeared in print against it until the article which appeared in your Journal of the 2nd, in which the keen vision of "Herkimer" has enabled him to detect a "mare's nest" in the report.

Unfortunately for "Herkimer" he is most grossly in error in respect to his facts, which, I shall show, is followed up throughout his communication. He commences by saying that this "project has received its quietus from the deliberate judgment of men of sense and of capital." So far from this being the case, subscriptions are now being made daily to the stock of this company; and if "Herkimer" resides in the county of Herkimer this fact must be known to him; at all events, the subscription books can be produced if further evidence is required. Propositions are also being received for the construction of the work. Besides, propositions have within a few days been made for the construction of the road from Utica to Syracuse, being the continuation of our line, which are considered very favorable indeed.

Now, I ask, if this looks like the abandonment of the work?

It is true, the Mohawk Valley road has not progressed as fast as its friends would have desired,—but this has not been owing to any want of confidence on the part of its proprietors; for this has increased as they have had time and the means of investigating it; but I can tell "Herkimer" it is owing to an entire different cause—to the unprecedented opposition which has been brought to bear by a company which has enjoyed one of the most profitable monopolies that has existed any where; and now, after they have grown rich and strong, "Herkimer" claims that this power should be used to perpetuate this monopoly to the exclusion of any other road, and thus prevent the public from

the benefit of competition. I would ask "Herkimer" whether the great reduction of fare, from three to two cents per mile, took place before or after the Mohawk Valley road was projected? The public know full well that it was made after, and they believe it would not have taken place otherwise.—Let me tell "Herkimer" that the exercise of this enormous power, to the exclusion of another road, will never be tolerated, and that the Mohawk Valley road is just as certain to be built and sustained as that the Valley remains where it now is.

"Herkimer" says, the "Utica and Schenectady road being paid for, and in *skilful hands*, it would soon *cool* the hopes of any adventurers who might embark their money in such a project." \* Is not this "*cool*" indeed! This is certainly one of the boldest assertions of power from a creature of Legislature that I have ever heard put forth. It should be well pondered, and its effects traced to their legitimate results, which I have no desire to do, as the fact speaks for itself.

I will now proceed to notice some of the misstatements which "Herkimer" has made, which I think when pointed out, he will himself acknowledge is an unpardonable oversight in a critic; and must fully illustrate the fact, that *self-interest* blinds and benumbs all the keener sensibilities, and shuts out entirely the evidence of truth.

In order to prepare the way for the great discovery which he is about to make, "Herkimer" commences by proposing to examine the details "of the estimate," (it is unfortunate that he did not, as I shall show) "to see whether the misstatements and omissions may not lead to a doubt of their being entirely reliable."

Herkimer then alludes particularly to the Engineer's report, which he says "goes fairly into the project," (and then repeats what he has already said, as though he was determined to make his blunders still more apparent), "but it contains so many omissions in the estimates as to create a doubt whether it is not got up to order," &c. At this last remark I would be inclined to smile, did I not feel disposed to spare his feelings, when I came to expose, to say the least of it, the superficial manner in which he has examined the report.

"Herkimer" says he has examined the report, and has discovered that no provision is made for *graveling the road bed from Schenectady to Canajoharie*, a distance of 38 miles. I admit, if this were so, it would be truly quite a discovery. But let us see what the facts are. That there shall be no mistake about this grand omission, I refer "Herkimer" to page 36 and 37 of the report of the Mohawk Valley road; he will then find as follows:—

That section, No 1, contains 85,470 cubic yards of road bed at 30c .....	\$25,641
That section, No. 2, contains 103,974 cubic yards of road bed at 30c .....	31,191
That section, No. 3, contains 120,150 cubic yards of road bed at 30c .....	36,045
That section, No. 4, contains 46,905 cubic yards of road bed at 30c .....	14,071

Total for graveling road bed from Schenectady to Canajoharie.....\$106,948

Now, I hope "Herkimer" will have the frankness to admit that this is an unpardonable oversight in him. After so plain and palpable an omission on the part of "Herkimer," I do not feel that I am called upon to follow him in his attempt to supply omissions in my report.

In speaking of the side hill excavation, he says, I have failed "to inform them (us) by what means

\* The italicising is my own.

this expense of 33 feet in width of excavation for his railroad is to be guarded against, when a ten feet beam for the canal has cost so much annually for the past 20 years." What nonsense! I would ask him if he supposes that the whole *prism* of the canal which is cut into the foot of the hill is composed of a ten feet beam?

He then says I have "omitted the usual ten per cent for contingencies." Now I submit whether the addition of so large a per centage is not evident that the person who makes it has not confidence in his own estimate. My rule and practice has been invariably to make my estimates with such care and so to average and classify the various items, and to put such a price as to render the addition of a per centage entirely unnecessary, and the result has verified them. I will simply further remark in respect to the estimates, that they will bear the closest scrutiny, and that they will be found ample to build a better road than the present.

The company have now two propositions from responsible parties, to build the road substantially at my estimate, and to take one \$350,000 of the stock of the company, and the other \$150,000, and 1,000,000 of 7 per cent bonds of the company.—These propositions should weigh at least as much as the assertions of Herkimer in regard to the insufficiency of the estimates.

As it regards the equipment, which I have estimated, it will be found abundantly ample to do the amount of business, which I have calculated will be done upon the road the first year; and it is vastly superior to that of the old company at the time it did the same amount of business. The 10 first class locomotive engines which I had estimated for, being all new, would be fully equal to 15 such as you would find on any railroad owning in all about 20 engines. If there should be a very large increase of business, beyond what I have estimated, an additional equipment might be required; in such an event, the company could well afford to supply it; and this I suppose to be the reasonable view of the subject.

"Herkimer" says—"some persons not over nice (he does not intend including himself as one of these) might not be able to see why the Utica and Schenectady railroad company should give up quietly (not they) 91,000 tons of their freight out of 98,000 tons which they have carried."

If we were not aware of the fact before, we certainly are now told by "Herkimer," that the "*skilful*" managers of this company would soon "*cool* the hopes" of any adventurers who might embark their money in this "project," with any such expectation.

We do not ask that the old company will give up one ton of freight, or one passenger which they have heretofore carried. All we ask is that we may have the increase which will take place by the time our road is completed, and has been one year in operation; and I am now well satisfied that I have very much under-estimated the increase of the freighting business, since the tolls have been taken off of the railroads.

In making my estimate of the probable amount of business which the Mohawk Valley road could safely calculate upon, I conceded the principle throughout, that there was an abundance of business for both companies, and that the old company were entitled to a business which would give them a clear net income of 10 per cent upon the capital actually expended in the construction of their road, which is the limit in their charter, and anything beyond that we had a right to claim, I know that



the old company has received much more than 10 per cent annually, and that its "skilful" managers will find various pretexts for not being satisfied with 10 per cent. As "Herkimer" says, "it is a kind of business that men who have *nursed* (and I admit the mother has been bountiful) will not surrender" readily.

"Herkimer" says quite too much for the interest of the old company, in respect to the means to which they will resort in order, if it were in their power, to destroy the new company, and thus perpetuate the monopoly of the greatest thoroughfare on this continent; they certainly do not want for the disposition, judging from the remarks of "Herkimer."

But let us see how this matter will stand. He says that they will reduce their prices, and many other things, but this seems to be the principal mode. The condition of the two companies to compete, will be something like this.

The old company has a capital of.....\$4,500,000  
The new one will have a capital of.....2,700,000

The old company must divide on.....\$1,800,000 more capital, therefore, than the new company.— Besides the new company will have two thirds of the way business, and will have a better connection east, and equally as good a connection west; so that we shall fairly divide the through business. The explanation for all this will be found in the report. With this state of things, I can assure "Herkimer" that we have no fear of competition. The old company will be the last to commence it, by *reducing their fares*.

MR. EDITOR—I do not make it a practice to reply to anonymous communications, nor do I intend to, further. If "Herkimer" will come out manfully over his own name, that we may know who we have to deal with, (for he may chance to be a large stockholder, and perhaps a director, who has been "nursed" by this bountiful mother,) he will receive a candid and courteous reply to anything which he may be disposed to say in the same spirit.

There are merits in this project which only have been waiting for a candid discussion, to have the public seize upon them, and to carry the work into execution. The want of this discussion, I think, is the principal reason the work has not progressed more rapidly.

EDWARD H. BRODHEAD,  
Civil Engineer.

#### Copper Mining in England.

The first account we find of the amount of copper ore sold in Cornwall, is in the year 1729, when the amount was 2,216 tons. For several years the product did not vary much from this amount. In the year 1764, the amount had reached 16,437 tons; in 1773 it was 27,654 tons. The increase was very gradual, the amount in 1800 being only 55,981 tons—an increase of about 100 per cent in twenty-seven years. The first year when it reached 100,000 tons was 1822, the amount being 100,364. The amount in 1832 was 136,719 tons, of which only 11,491 are pure copper. In all the above estimates, only from eight to ten per cent of the amount of ore is obtained in pure metal. The following is a tabular view of the sales of British copperores in the district of Cornwall and Swansea, from the 30th June, 1832, to 30th June, 1850, showing the averages of the per centage of produce in metal, prices and computed quantities of fine copper, together with general averages, total produce in metal, and the money value of the whole. The value of ore computed to produce a ton of copper is also given:

CORNWALL.									
Year.	Tons.	Computed quantity of ore in tons of 21 cwt.	Average produce per cent.	Computed quantity of fine copper.	Average price of ore per ton of 21 cwt.	Total value in money.			
				Tons.	£. s. d.	£.			
1833...	138,300	8		11,185	6 1 6	858,709			
1834...	143,296	7½		11,225	6 4 0	887,902			
1835...	150,617	8½		12,272	5 18 6	893,403			
1836...	140,981	8½		11,640	6 17 0	957,752			
1837...	140,753	7½		10,823	6 9 1	918,614			
1838...	145,688	7½		11,527	5 17 6	857,780			
1839...	159,551	7½		12,451	5 17 0	932,298			
1840...	147,266	7½		11,038	5 7 6	792,758			
1841...	135,090	7½		9,987	6 1 6	819,949			
1842...	135,581	7 5-16		9,896	6 1 6	822,871			
1843...	144,806	7 9-16		10,926	5 11 0	804,446			
1844...	152,667	7½		11,247	5 6 10	815,246			
1845...	157,000	7½		12,239	5 6 3	835,351			
1846...	158,913	7 13-16		12,448	5 11 7	886,785			
1847...	148,674	8 1-16		11,966	5 11 9	830,739			
1848...	155,616	8½		12,870	5 6 0	825,080			
1849...	144,983	8 5-16		12,053	4 19 0	716,917			
1850...	150,890	7 13-16		11,824	5 8 0	814,037			
Tot.	2,650,672			207,617		15,270,637			
Av.	147,259	7.833		11,534	5 15 3	848,369			

SWANSEA.									
Year.	Tons.	Computed quantity of ore in tons of 21 cwt.	Average produce per cent.	Computed quantity of fine copper.	Average price of ore per ton of 21 cwt.	Total value in money.			
				Tons.	£. s. d.	£.			
1833...	13,101	8		1,158	7 5 0	95,008			
1834...	18,112	8		1,580	7 7 6	133,821			
1835...	28,771	9		2,833	7 15 6	223,990			
1836...	34,366	11		3,849	9 17 6	340,025			
1837...	34,216	11		3,960	9 18 0	338,976			
1838...	42,931	13		5,906	11 4 6	481,323			
1839...	49,474	14		7,296	12 1 6	597,996			
1840...	56,279	15		8,473	11 19 6	674,012			
1841...	59,378	15 5-16		10,290	14 14 6	871,248			
1842...	56,821	16		9,378	14 5 0	808,182			
1843...	60,554	16		9,862	13 6 0	805,213			
1844...	65,520	16 15-16		11,108	13 9 4	882,568			
1845...	62,950	16 7-16		10,349	12 1 5	759,999			
1846...	64,987	15 1-16		9,788	11 10 6	748,915			
1847...	53,284	16		8,857	12 13 9	676,069			
1848...	50,731	17		8,645	12 8 2	629,660			
1849...	49,135	18		9,011	12 5 6	604,245			
1850...	40,755	16 3-16		6,603	12 14 6	518,265			
Total.	841,365			128,946		10,189,515			
Av.	46,742	15-325		7,164	12 2 3	566,084			

CORNWALL AND SWANSEA AVERAGE.									
Total produce of the whole in fine copper.	Total value of the whole in money.	Average value of the quantity of ore to make a ton of copper.	Average value of Cornish ore to make a ton of copper.	Average value of Swansea ore to make a ton of copper.					
Tons.	£.	£. s. d.	£. s. d.	£. s. d.					
1833. 12,343	953,717	77 5	4 76 15	5 82 0	10				
1834. 12,805	1,021,723	79 15	9 79 2	0 84 14	0				
1835. 15,105	1,117,393	73 19	5 72 15	10 79 1	3				
1836. 15,489	1,297,777	83 15	8 82 5	7 88 6	9				
1837. 14,783	1,257,590	85 1	4 84 17	6 85 12	0				
1838. 17,433	1,339,103	76 16	3 74 8	3 81 9	11				
1839. 19,747	1,530,294	77 9	10 74 1	5 81 19	3				
1840. 19,511	1,466,770	75 3	6 71 16	5 79 10	11				
1841. 20,277	1,691,197	83 8	1 82 2	0 84 13	4				
1842. 19,274	1,631,053	84 12	5 83 3	0 86 3	7				
1843. 20,788	1,609,659	77 8	8 73 12	7 81 13	0				
1844. 22,355	1,697,814	75 18	9 73 12	3 79 9	0				
1845. 22,588	1,595,350	70 12	6 68 5	0 73 8	10				
1846. 22,236	1,635,700	73 11	2 71 6	4 76 10	3				
1847. 20,823	1,506,808	72 7	3 69 8	6 76 6	7				
1848. 21,514	1,454,741	67 12	4 64 9	2 72 16	8				
1849. 21,064	1,321,163	63 14	5 59 9	7 67 1	2				
1850. 18,427	1,332,302	72 6	0 68 16	11 78 9	9				
Tot.	336,562	25,460	154						
Av.	18,698	1,414,453	75 12 11	73 11	1 79 0	4			

#### Portage Lake Mining District.

Little has been heard from this section for some time, but most encouraging accounts are now beginning to come in. Masses of pure copper are said to stick out from well defined veins. A number of experienced miners are about commencing operations in that section, and we may soon expect to hear of new and interesting discoveries of native metal.

#### Great Discovery of Iron Ore on the Northern Shore of Lake Superior.

A mountain of iron ore has recently been discovered at Gros Cap, near Michipoten river, on the north shore of the Lake. Large quantities of iron are deposited in dikes, and situated so near the coast that the ore can be wheeled on board a vessel. The gentleman who made the discovery, says that thousands of tons can be extracted from the mountain, which is some three or four hundred feet in height. A company is being formed at Detroit to work the mine, and from the description there can be little doubt of their success.

#### To Chief Engineers, Directors of Railroads, Canals, etc.

A Civil Engineer and Surveyor, who has been professionally engaged under the British Government, East India Company, etc., is desirous of obtaining employment as an Assistant. No objection to the South or West. Address for one month to C. E. & S., American Railroad Journal office. August 16, 1851.

#### Railroad Iron.

THE Undersigned offer for sale 2,000 tons of Railroad Iron, to arrive at New York in the month of September next. It is of a most approved pattern and quality, and weighs about fifty-five pounds to the yard.

CHOUTEAU, MERLE & SANDFORD.  
No. 51, New Street.

New York, August 9.

#### TO CONTRACTORS.

Belpre and Cincinnati Railroad.

Engineer's Office, }  
Chillicothe, July 30, 1851. }

SEALED PROPOSALS will be received at the Engineer's Office, in Chillicothe, until the 18th day of September, 1851, for the Graduation, Masonry and Bridging of 42 miles more of their road;—25 miles being between Greenfield and Blanchester, and 17 miles east of the 11 miles now under contract east of Chillicothe.

Plans, Profiles and Specifications will be ready for examination, at the Engineer's Office, on and after the 10th day of August. Blank Proposals will be furnished to Contractors, and all necessary information given upon the line or at the office concerning the quality and quantity of work.

W. P. CUTLER, Pre'st.  
A. KENNEDY, Chief Engineer.

#### Virginia Locomotive and Car Works.

Wolfe Street and River Potomac, Alexandria, Va.  
SMITH & PERKINS, Proprietors.

#### MANUFACTURE

Locomotive Engines and Tenders.  
Marine and Stationary Engines and Boilers.  
Chilled Car Wheels and Axles.  
Patent Chilled and Wrought Slip-tire.  
Machinery and Castings generally.

The undersigned having erected very extensive shops, and procured the most modern machinery and tools, are prepared to execute orders for Locomotive Engines, Cars, and Machinery of all kinds, with despatch, and on the most favorable terms.

R. C. SMITH,  
Late of the Alexandria Iron Works.  
THATCHER PERKINS,

Late Master of Machinery on the Balt. & O. R.R.  
July 22, 1851.

**Bridges & Brother,  
DEALERS IN  
RAILROAD AND CAR FINDINGS,**  
64 Courtlandt street, New York.

Having established a general Depot for the sale of articles used in the construction of Railroads, Locomotive Engines and Railroad Cars, we would invite your attention to our establishment. We have already in store a good assortment of CAR FINDINGS and other articles used in the trade, and feel justified in saying, that should you desire anything in our line, we can supply on terms perfectly satisfactory, and in the event of your desiring to order, you may feel assured that your terms will be as good as though you were here to make your own purchases.

Among our goods may be found Railroad Car Wheels, Axles, Jaws and Boxes, Nuts and Washers, Bolts, Brass Seat Hooks and Rivets, Window and Blind Springs, Lifters and Catchers, Door Locks, Knobs and Butts, Ventilators and Rings, Car Lamps, Coach and Wood Screws, Jack and Bed Screws and Babbitt's Metal; also Plushes, Damask, Enamelled Head Linings, Cotton Duck for Top Covering in width sufficient without seams, Curled Hair and all other articles appertaining to cars.

Also a new and valuable CAR DOOR LOCK, well adapted to the Sliding Door. This is decidedly the best yet introduced.

**LOCOMOTIVE ENGINE LANTERNS**, the best article made in the country. Whistles, Gauge and Oil Cocks, Hemp Packing, American, Russian and Italian. We are also agents for Lightner's Patent Journal Box for Car Axles, that invaluable invention, for the economical use and preservation of Car Journals.

Coach VARNISH and Japan of the best quality. We would also offer our services for the purchase as well as for the sale of goods on commission.—Both members of our firm have had the experience of many years in the manufacture of Railroad Cars, and our Senior was a member of the well known house of DAVENPORT & BRIDGES, Car Manufacturers, Cambridgeport, Mass. With our knowledge of matters pertaining to Railroads, we feel quite confident in giving satisfaction to both buyer and seller, and hope that through assiduity and attention to any business entrusted to our care we shall merit a continuance of confidence and patronage.

BRIDGES & BROTHER.

July 22, 1851.

**Lightner's Patent Axle Boxes.**

**T**HE Undersigned are Agents for, and offer for sale, *Lightner's Patent Axle Boxes*, for Railroad Cars and Tenders, which have, by thorough experience, been demonstrated to be one of the most valuable improvements ever introduced in Locomotion. The saving effected in oil alone, will in a few months pay the first cost of these boxes, independent of other advantages. They are now in use upon the following, among other roads, viz:

Boston and Worcester, Boston and Providence, Boston and Fitchburg, Nashua and Lowell, Providence and Worcester, Northern, N.H., Cheshire, Manchester and Lawrence, Concord, N.H., Concord and Claremont, Ogdensburg, (Northern, N.Y.) Stonington, New London Willimantic and Palmer, New Jersey Central, New Hampshire Central, Worcester and Nashua, Fitchburg and Worcester, Connecticut and Passumpsic, Lowell and Lawrence, Salem and Lowell, Wilton Branch, Newburyport.

Below will be found the certificates of a number of gentlemen, whose opinions will be good authority in every part of the country.

Office Boston and Prov. R. R., }  
Boston, Dec. 23, 1849. }

Mr. JOHN LIGHTNER,

Sir,—It affords me pleasure to say, that after two years' trial of your boxes, I am fully and entirely satisfied of their superiority over any other pattern we have used. This superiority consists in economy of oil and freedom from "heating." I have tried every pattern of box in use, of any note, and do not hesitate to say, that you have devised one which in every respect combines greater advantages than any other within my knowledge; these advantages are so manifest, that I am fitting up all

our cars with your boxes, as fast as practicable.

Annexed, is a statement of an experiment with your boxes, the result of which may be of use to your interests.

Ten passenger cars, running 72 wheels, fitted up with Lightner's boxes used 41½ pints of Patent Oil, at 50 cts. per gallon, ran 43,099 miles, equal to 5-16 pints per wheel for 43,099 miles. Speed, 30 to 40 miles per hour.

Very respectfully yours,

W. RAYMOND LEE, Supt.

I have examined the above statement of Mr. Lee, and fully concur with him in his opinion of the superiority of Lightner's box.

GEORGE S. GRIGGS,  
Supt. Machine Shop B. & P. R. R.

Boston, July 26, 1849.

This is to certify that J. Lightner's axle boxes for railroad cars and locomotive tenders, have been in use on the Boston and Worcester railroad one year, and I unhesitatingly pronounce it, in my opinion, the best and most economical one in use, requiring less oil, of easy application, not susceptible of derangement, as in most kinds in use. When requiring repairs or renewal, the same may be done in one-fourth of the time usually occupied for that purpose. The box requires oiling not oftener than once a month—is kept quite free from dust, and consequently wears much longer than those generally in use.

D. N. PICKERING,  
Supt. Motive Power, B. & W. R. R.

Office of Boston Locomotive Works, }  
December 12th, 1849. }

The Boston Locomotive Company have been using J. Lightner's patent axle boxes under the tenders of their engines for several months, and find them more highly spoken of by the railroad companies that have used them in regard to economy in the use of oil, their durability and their ease of adjustment, than any other boxes which they have used. We therefore do not hesitate to recommend them to all railroad companies.

DANIEL F. CHILD,  
Treas. Boston Locomotive Works.

Taunton Locomotive Works, }  
Taunton, July 7, 1849. }

Mr. H. F. ALEXANDER,

Dear Sir,—Your favor of yesterday came to hand in which you ask what success we have met with, in using Mr. Lightner's patent box for cars, engines, &c.

We have put it in use on the Boston and Providence railroad, New Bedford and Taunton Branch railroad, Central railroad, N. J., Norfolk County, Rutland and Burlington, and as yet we have not had one complaint from them; and from what we have used of it, and witnessed, we do not hesitate to say that it is superior to anything in use for that purpose. It is simple in its construction, and easy of access, and the reservoir is held close to the shaft, and the oil and journal is perfectly secure from dust; they will run from four to six weeks without replenishing the oil. The brass in the box is changed very much easier than by any other plan that we have seen.

Very resp. yours,

W. W. FAIRBANKS, Agent.

Office Providence & Worcester R. R. Co., }  
Providence, Dec. 17th, 1850. }

H. F. ALEXANDER, Esq.,

Sir,—The "Lightner patent boxes" for cars and locomotives have been in use under a portion of the passenger cars and engines of this company for upwards of two years, and have given very great satisfaction.

Though combining many excellent qualities, their great superiority consists in the economy of oil.

The result of experiments upon this road shows the consumption of oil by the use of this box, to be not more than one sixth part the quantity consumed by the use of the common box.

With the common box, eight passenger cars, 64 wheels, running 90 miles per day, consumed in 12 months 520 gallons of oil, being an average of 8½ gallon per wheel per annum.

With the Lightner box the same cars running the same number of miles per day, during the same space of time consumed 73½ gallons of oil, being an average of 1½ gallon per wheel per annum.

So manifest are its advantages over any other box used by this company, it is intended to place it under all our cars as soon as practicable.

Besides the saving of oil, as they afford complete security from dust, we think them more durable than any other box in use.

Another advantage resulting from the use of this box is, cars run more easier than with the common box. The saving in fuel which it would effect, would of itself, we think be a sufficient inducement to use this box in preference to any other known to us.

Very respectfully,

ISAAC H. SOUTHWICK, Supt.

JOHN B. WINSLOW,  
Supt. Machine Shop, P. & W. R. R.

Cambridgeport, April 5th, 1851.

H. F. ALEXANDER, Esq.

Sir,—This may certify that I have been engaged in the manufacture of railway cars since 1834, and have built for the different railroad companies cars of all descriptions to the amount of three millions of dollars, and have used on the above cars all kinds of journal boxes, and find that none give better satisfaction than the "Lightner patent box," both on account of the saving of oil and the arrangement for taking out and re-placing the composition by means of the sliding key, and other conveniences which no other box possesses.

Yours respectfully,

CHARLES DAVENPORT.

Worcester, March 17th, 1851.

H. F. ALEXANDER, Esq.

Dear Sir,—This is to certify that I have been for some years past engaged in building cars, and that I have tried most, if not all of the patent boxes, and have found Lightner's patent superior to all others as far as the saving of oil is concerned, also the ease with which they are fitted and exchanged in case they get out of order.

For the last three years, I have put them under all of the cars I have built, and in every instance they have given the most entire satisfaction.

Yours truly,

OSGOOD BRADLEY.

Office Union Works, So. Boston, }  
May 23d, 1851. }

This certifies that I have applied Mr. J. Lightner's patent axle boxes to my locomotives and tenders for the past two years. I consider them superior to all others,—economical in their use, and possessing many important advantages not found in any other boxes.

SETH WILMARTH.

Office 15, R. R. Exchange, Boston, }  
June 1, 1851. }

This is to certify, that we have known the success of Lightner's patent journal boxes upon various roads in New England the past three years, and have been led to examine their peculiar construction.—We are well satisfied of their merits, and have adopted them upon our small gravel cars, and take pleasure, as we ever have done, in recommending their use upon all roads where we are employed in the construction.

GILMORE & CARPENTER,  
Contractors,

Amoskeag Manufacturing Co. Machine Shop, }  
Manchester, May 31, 1851. }

H. F. ALEXANDER, Esq.

Dear Sir,—We are using the Lightner box on all the engines and tenders we build, and we are satisfied that it is the best box in use, and recommend the same to all those who purchase engines at our works.

Yours respectfully,

O. W. BAYLEY, Agt.

This is to certify that the Fitchburg railroad company having become satisfied of the superiority of J. Lightner's patent Axle Boxes for Railway Cars and Locomotive Tenders adopted the same,



and are bringing them into general use upon their road.

One year's experience with the above improvement, has fully convinced me that there has never been anything offered to the public for that purpose which possess such intrinsic value; in fact, this is an improvement which seems to overcome all the difficulties found in all the various kinds now in use. It possesses very many advantages over all others: Some of which are [first] the first cost is much less than that of most boxes in use. [Secondly] 75 per cent is saved in oil; one gill applied to each Journal once a month, or one quart to an eight wheel car, is all these boxes require per month [Thirdly] no dust can gain access to the Journal, which is constantly lubricated with clean oil; hence the saving in repairs of Journals and composition bearings, is a matter of importance. [Fourthly,] its construction is truly simple—not complicated, having nothing liable to become loose by constant and severe service. [Fifthly] for convenience there is nothing which approaches this improvement.—The composition bearings may be removed from the Journals of an eight wheel car, by one man, and returned, or duplicates, in twenty minutes, while under the car: the same would require two men, at least half a day with other boxes in use.—The trucks and wheels using these boxes, are free from oil and dirt, usually seen upon all railroad cars, at great expense to the corporation.

NATH'L JACKSON,

Supt. Car Building and Repairs, F.R.R. Co.

Boston, March 9, 1849.

I hereby certify, that I have examined a box for Car Journals, invented by Mr. Lightner of Roxbury, Mass, and I have thought so well of it that I have adopted it on our railroad, I have known of its success on other roads.

S. M. FELTON,

Supt. F. R. R.

Office of the Central R. R., N. J., }  
Elizabethtown, May 1849. }

H. F. ALEXANDER, Esq.,

Dear Sir:—Your favor, [wishing to be informed how we liked Lightner's patent axle boxes for R.R. Journals,] has been duly received; in answer we would say, we have used the boxes on Locomotive tenders one year, more or less, and on our cars some six months. I consider them the best boxes in every respect, I have ever used, or even seen used on any other roads—for safety, durability and the economy pertaining to all the details connected with the boxes and Journals of R. R. Car wheels; and we shall adopt them upon this road.

Yours Respectfully,

JOHN O. STEARNS.

Supt. Central Railroad Co., N. J.

Manchester, N. H., Nov. }  
1st, 1850. }

H. F. Alexander, Sir,

I have used "Lightner's Boxes" under all the Cars of the Manchester and Lawrence railroad, and feel no hesitation in saying that I think them to be the best boxes now in use.

Yours, &c.,

THEODORE ATKINSON, Agent.

Cheshire R. R. Office, Keene, }  
March 5th, 1851. }

Mr. H. F. Alexander,

Sir,—Lightner's Patent Boxes have been used on the Cheshire R. R. about a year, and have given the highest degree of satisfaction.

All the Passenger Cars now in use, and a considerable number of Merchandize Cars are furnished with them, and they will take the place of the Common Boxes on all the cars as fast as circumstances will permit.

Very Resp't.

L. TILTON,

Supt. Cheshire R. R.

Boston and Worcester Railroad, }  
Boston, April 1st, 1851. }

H. F. Alexander, Esq.,

Dear Sir,—Lightner's Patent oil saving box for railroad cars, has been adopted by this corporation; we are taking out the common and substituting the

Lightner's at the rate of fifty boxes per month; it will soon take the place of all others, as it is decidedly preferable to any heretofore used by this corporation.  
G. TWITCHELL, Supt.

Statement of amount of oil used on 32 8-wheel freight cars, on the Boston and Providence Railroad (with Lightner's Boxes) from March 10, 1849, to February 27, 1851, and upon 12 8-wheeled passenger cars from September 8, 1849, to February 27, 1851.

#### FREIGHT CARS.

Amount Oil.	No. months.	Amount Oil.	No. months.
1.—21 pts.	10	17.—23½ pts.	14
2.—19 "	6	18.—23½ "	11
3.—25 "	13	19.—36 "	21
4.—18 "	7	20.—22 "	10
5.—22 "	12	21.—38½ "	24
6.—24 "	13	22.—29 "	23
7.—20 "	11	23.—35½ "	23
8.—21 "	11	24.—37½ "	23
9.—23½ "	10	25.—51 "	23
10.—21 "	9	26.—31½ "	24
11.—20 "	9	27.—28½ "	23
12.—21½ "	11	28.—36 "	23
13.—19 "	8	29.—50½ "	24
14.—25½ "	17	30.—50 "	23
15.—20½ "	10	31.—41 "	23
16.—31 "	18	32.—39½ "	23

Total, 925½ pts. 510

#### PASSENGER CARS.

1.—19½ pts.	18	7.—30 pts.	18
2.—25½ "	18	8.—25½ "	18
3.—33½ "	16	9.—29 "	18
4.—19 "	15	10.—46½ "	17
5.—15 "	15	11.—9 "	9
6.—22 "	18	12.—65½ "	17

Total, 340 pts. 197

Averaging 1 4-5 pints of oil for freight, and 1 7-10 for passenger cars per month only!

All orders and enquiries promptly attended to.

BRIDGES & BROTHER,

No. 64 Courtlandt st., New York.

July 25, 1851.

#### To Boiler Makers, Engineers, etc., etc.

PATENT LAP-WELDED IRON TUBES,

Manufactured by the

BIRMINGHAM PATENT IRON TUBE CO.

UNDER

PROSSER'S PATENT,

from one and a quarter to eight inches in diameter.

These tubes are well known for their superiority over all other descriptions for Locomotive, Marine and other Steam Engine purposes, for which they are used very extensively in Great Britain and on the Continent of Europe.

For sale in quantities to suit purchasers, by

WILLIAM BIRD & CO.,

44 Wall st., New York.

July 26, 1851.

#### To Railroad Companies.

THE undersigned has discovered and patented an imperishable, cheap, and sufficiently elastic substance, to be introduced between the sill and rail, so that the stone sill can be used in place of the wooden sill: entirely overcoming that rigidity where the rail is laid directly on stone. Address

J. B. GRAY, Philadelphia.

4m

July 10, 1851.

#### To Contractors.

Peru and Indianapolis Railroad.

PROPOSALS will be received at the office of the Peru and Indianapolis Railroad, in Noblesville, until the evening of the 13th of August next, for the Grading of the line of the above road from Noblesville to Peru, a distance of fifty miles. Also the masonry for Bridges over the Wabash, Big Pipe and White Rivers.

The proposals are to be addressed to W. J. HOLMAN, Esq., Chief Engineer, at the Company's Office, where plans and specifications of the work may be seen. Payments will be made monthly in cash, reserving 15 per cent. till the contracts are completed.

Indianapolis, July 12, 1851.

#### European and North American Railway.

THE undersigned, the three persons first named in the first section of an act passed by the Legislature of Maine, and approved the twentieth day of August last past, entitled "An Act to incorporate the European and North American Railway Company," and being specially authorised therefor in and by said act, hereby give public notice that, for the purpose of receiving subscriptions to the stock of said company, as established by the act aforesaid, according to the provisions thereof, not exceeding forty thousand shares, books of subscription will be opened under the direction of the undersigned, according to the regulations prescribed, at the time and places following, viz:—On WEDNESDAY, the Twentieth day of August next,

At Calais, Maine, with Noah Smith, Jr., Esq.

Eastport, do. " Col. Bion Bradbury.

Machias, do. " Walker & O'Brien,

Ellsworth, do. " Seth Tisdale, Esq.

Oldtown, do. " Geo. P. Sewall, Esq.

Bangor, do. " Geo. W. Pickering, Esq.

Orono, do. " Hon. Israel Washburn, Jr.

Waterville, do. " Hon. Timothy Boutelle.

Brunswick, do. " Prof. William Smyth.

Augusta, do. " B. A. G. Fuller, Esq.

Belfast, do. " John Y. McClintock, Esq.

Portland, do. " John B. Brown, Esq.

Portsmouth, N.H. " Hon. I. Goodwin.

Salem, Mass. " Stephen A. Chase, Esq.

Boston, do. " Francis Skinner & Co.

Lowell, do. " John Wright, Esq.

Worcester, do. " Charles Washburn, Esq.

Providence, R.I. " Billings Brastow, Esq.

Hartford, Conn. " Hon. C. F. Pond.

New Haven, do. " Allen Prescott, Esq.

New York, N.Y. " R. & G. L. Schuyler, No.

2 Hanover street.

Albany, do. " John V. L. Pruyn, Esq.

Troy, do. " Hon. John D. Willard.

Philadelphia, Pa. " Hon. Wm. C. Patterson.

Montreal, Canada, " Hon. John Young.

Quebec, do. " J. B. Forsyth, Esq.

Said books will remain open for ten successive days at the places and with the persons aforesaid.

Dated at Portland, this sixteenth day of June,

A. D. 1851.

ELIJAH L. HAMLIN,

ANSON G. CHANDLER,

JOHN A. POOR.

#### Trautwine on R. R. Curves.

By JOHN C. TRAUTWINE, Civil Engineer,

Philadelphia, Pa.

IN press, and will be published in a few days; accompanied by a Table of Natural Sines and Tangents to single minutes, by means of which all the necessary calculations may be performed in the field.

This little volume is intended as a field-book for assistants; and will be found extremely useful, as it contains full instructions, (with wood cuts) for laying out, and adjusting curves; with Tables of Angles, Ordinates, etc., for Curves varying from 13 miles, down to 146 feet Radius.

A portable Table of Natural Sines and Tangents to minutes, has for a long time been a desideratum among Engineers, independently of its use in laying out curves.

The volume is neatly got up in duodecimo; and handsomely bound in pocket-book form.

Sold by Wm. Hamilton, Actuary of the Franklin Institute, Philadelphia. Price \$1.

Also in press, and will be issued in a few weeks, "Trautwine's Method of Calculating Excavation and Embankment."

By this method, which is entirely new, (being now made known for the first time) the cubic contents are ascertained with great ease, and rapidity, by means of diagrams, and tables of level cuttings. Thin octavo; neatly half bound, \$1. For sale by Wm. Hamilton.

June 28, 1851.

#### Railroad Iron.

CONTRACTS made by the subscribers, agents for the manufacturers, for the delivery of Railway Iron, at any port in the United States, at fixed prices, and of quality tried and approved for many years, on the oldest railways in this country.

RAYMOND & FULLERTON, 45 Cliff st.

**Notice to Contractors.***Steubenville and Indiana Railroad.*

**PROPOSALS** will be received at the Office of the Steubenville and Indiana railroad company in Steubenville, until the first day of October next, for the Grading and Masonry of the first division of the road extending from Steubenville to the Connotten valley and also for the construction of the entire road between Steubenville and Coshocton; and also distinct proposals for the construction of that portion of the road extending from Coshocton to Newark.

The entire length of this line is about 110 miles, and it contains work of all descriptions, in great variety, some of which is quite heavy.

Proposals will be received for the Grading and Masonry of the first division entire or in sections of about a mile each, the Company reserving the privilege to make such disposition of the whole work, as may appear most conducive to its interests.

Plans, profiles and specifications can be seen at the office of the Company after the 15th of September, and further information may be obtained on application to J. Blickensderfer, Jr., Chief Engineer, or to the undersigned,

D. KILGORE, President.

**Notice to Contractors.***Engineers Office, E. T. & V. R. R. Company, Greenville, E. T., June 5th, 1851.*

**PROPOSALS** will be received until the 1st day of October next, for the Grading and Masonry of that part of the E. T. & V. Railroad between the Eastern terminus of said road at King's Meadow, and Rheatown, in Greene County, a distance of about forty seven miles. A large amount of very heavy work, both in Grading as well as Masonry, will be found on this division, offering strong inducements to able Contractors.

Maps, Profiles, and Specifications can be seen at this Office, on and after the 20th of July next.

The Company reserve the right to reject all, or any proposals that they deem unsatisfactory.

Proposals should be directed to the Treasurer and Secretary of the E. T. & V. Railroad Company, Jonesborough, E. T.

LLOYD TILGHMAN,  
Chief Engineer.

**Railroad Lanterns.**

**COPPER** and Iron Lanterns for Railroad Engines, fitted with heavy silver plated Parabolic Reflectors of the most approved construction, and Solar Argand Lamps; manufactured by

HENRY N. HOOPER & CO.,  
No. 24 Commercial St. Boston.

August, 16, 1849. 6m33

**Railroad Iron.**

**THE** Subscribers, Agents for the Manufacturers, are prepared to contract for the delivery of Railroad iron at any port in the United States or Canada, or at a shipping port in Wales.

WAINWRIGHT & TAPPAN,  
29 Central Wharf.

Boston, June 1, 1851.

**Bowling Tire Bars.**

40 Best Flange Bars 5½x2 inches, 11 feet long.  
40 " 5½x2 " 7 feet 8 in. long.  
40 " Flat " 6x2 " 11 feet long.  
40 " " 6x2 " 7 feet 8 in. long.

Now in store and for sale by  
RAYMOND & FULLERTON,  
45 Cliff street.

**To Railroad Companies,  
Machinists, Car Manufacturers, etc., etc.**

**CHARLES T. GILBERT,**  
NO. 80 BROAD ST., NEW YORK.

**IS** prepared to contract for furnishing at manufacturer's prices—

Railroad iron,  
Locomotive Engines,  
Passenger and Freight Cars,  
Car Wheels and Axles,  
Chairs and Spikes.

Orders are invited; and all inquiries in relation to any of the above articles will receive immediate attention

**THE** Fourth Annual Exhibition of AMERICAN MANUFACTURES, by the MARYLAND INSTITUTE for the Promotion of the Mechanic Arts, will be opened in Baltimore on the 20th October, 1851.

The Exhibition will be held in the SPLENDID NEW HALL of the Institute, (fronting on Baltimore street) now being rapidly completed. Their edifice is centrally situated, chaste in its architecture, solid in its construction, and is by far the largest and most complete building in the United States, devoted to the Mechanic Arts. It may be added that this building is 355 feet long by 60 in breadth, with an average height of 68 feet, containing some twelve apartments, the largest of which is 255 feet by 60, and that the cost will be over \$70,000.

To this Exhibition, the Managers ask the attention of all engaged in industrial pursuits throughout the country, and cordially invite them to contribute specimens of their best productions for public inspection, and to compete for the prizes offered by the Institute. These prizes consist of GOLD and SILVER MEDALS, DIPLOMAS, etc., which were last year distributed as follows:—Gold Medals, 16; Silver ditto, 90; Diplomas, 60; besides 85 articles of Jewelry, etc., to ladies. Fair play will be scrupulously observed towards all, and every facility of Steam power, shafting, fixture, labor, &c., &c., will be amply provided free of expense. The machinery will be under a special superintendent, and a fine display of it is looked for. The last exhibition of the Institute was visited by more than 40,000 persons, and with their vastly improved accommodations and alterations, this number will be doubled at the coming display, embracing many Virginians, Pennsylvanians, and other strangers from the South and West.

Joshua Vansant, President.

Ed. Needles, } Vice Presidents.

F. A. Fisher, }

Samuel Sands, Rec. Sec'y.

Wm. Prescott Smith, Cor. Sec.

F. J. Clare, Treasurer.

**BOARD OF MANAGERS.**

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(The last nine in *Italics* are the Committee on Exhibition.)

The Hall will be opened for the reception of goods on MONDAY, 13th October; on the next Monday, 20th, at 7 P. M., the Exhibition will be formally opened to the public, and will positively close on Wednesday, 19th November. Articles for competition must be in the Hall by Thursday night, Oct. 16, unless delayed in shipment after starting in ample time.

Those who intend depositing, will give the Committee or the Agent, notice as early as possible, stating the nature of the goods, and probable amount of room required, to exhibit them to advantage.

Circulars, containing a view of the new Hall and the full regulations of the Committee, with special information, if required, may be had promptly, by addressing the undersigned, or the Institute's Agent, J. S. Selby, Baltimore. *post-paid.*

ADAM DENMEAD,

Chairman Com. on Exhibition for 1851.

**SUPERIOR BLACK WRITING & COPYING  
INK.**

**Jones' Empire Ink.**

87 Nassau st., Sun Building, New York city.

Net prices to the trade—

Quarts, per dozen,	\$1 50	6 oz. per dozen,	\$0 50
Pints,	1 00	4 " "	0 37½
8 ounces,	0 62½	2 " "	0 25

On draught per Gallon, 20 cents.

This is the best Ink manufactured, it flows freely, is a good copying ink, and will not mould, corrode, precipitate or decay. Orders for export, or home consumption, carefully and promptly attended to by  
THEODORE LENT.

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**To Railroad Companies, etc.**

The undersigned has at last succeeded in constructing and securing by letters patent, a Spring Pad-lock which is secure, and cannot be knocked open with a stick, like other spring locks, and therefore particularly useful for locking Cars, and Switches, etc.

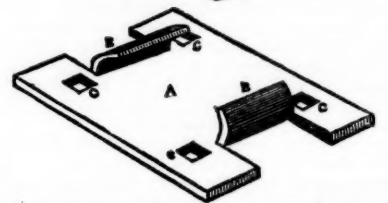
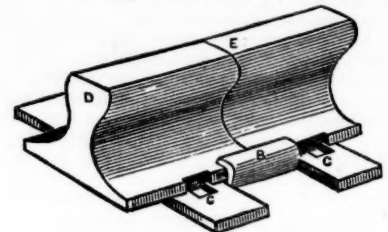
I also invite attention to an improved PATENT SPRING LOCK, for SLIDING Doors to Freight and Baggage Cars, now in use upon the Pennsylvania Central, Greenville and Columbia, S.C., Reading, Pa., and other Railroads.

Companies that are in want of a good Pad-lock, can have open samples sent them that they may examine and judge for themselves, by sending their address to

C. LIEBRICH,  
46 South 8th St. Philadelphia.

May 9, 1851.

**The American Railroad Chair  
Manufacturing Co.**



**ARE** prepared to make WROUGHT IRON RAIL ROAD CHAIRS, of various sizes, at short notice.

By use of the WROUGHT IRON CHAIR, the necessity of the wedge is entirely done away—the lips of the chair being set, by means of a sledge or hammer, close and firmly to the flange of the rail.

The less thickness of metal necessary in the Wrought Iron Chair gives much greater power and force to the spikes when driven—and consequently a much less liability to the spreading of the rails by reason of the spikes drawing or becoming bent.

The less weight necessary in the Wrought Iron Chair, will enable us to furnish them at a cost much below that of CAST IRON CHAIRS.

**DESCRIPTION OF THE ABOVE CUTS.**

Figure 1 is a perspective view of the rail secured in the chair, and fig. 2 is a perspective view of the chair itself. D, E, are sections of two rails placed together, and secured at the joint on the chair by the jaws B, B. The chair is bolted down by spikes C, C. In fig. 2, the chair is represented as made of a single block or plate A of wrought iron.

The chair is set in its proper place on the track, spiked down, and the ends of the two rails brought together within the jaws as represented in fig. 1.

For further information address,

N. C. TROWERIDGE, Secretary,  
Poughkeepsie, N. Y.

June 1, 1851.

**Railroad Commission Agency.**

**THE** Subscriber offers his services to Railroad Co's and Car Makers for the purchase of equipment and furniture of roads and depots and all articles and materials required in the construction of cars, with cash or approved credit. No effort will be spared to select the best articles at the lowest market price.

He is sole Agent for the manufacture of the ENAMELED CAR LININGS, now in universal use. The best Artists are employed in designing new styles, and he will make to order pieces with appropriate designs for every part of the car, in all colors, or with silver grounds and bronzed or velvet figures.

He is also Agent for Page's Car Window Sash Fasteners, which is preferred by all who have used it to any other.

CHARLES STODDER,  
75 Kilby st., Boston.

June 20, 1851.

3m.